Resume | See Instruction Sheet | DATE OF RESUME 5/31/65 | DATE RECEIVED

A. ...ATA

245

2. ORIGINATOR CONTROL NO(S). 8069

3. IDENTIFICATION NO. N.A.

4. AUTHOR(S): State Colleges and University of Wisconsin, Joint Staff of Coordinating Comm. for Higher Edu. in Wis.

5. TITLE OF DOCUMENT ABSTRACTED: Physical Facilities Survey and Utilization Study

6. PUBLICATION TITLE: N.A.

7. EDITOR(S): N.A.

8. PLACE OF ORIGIN
ORG. JSCCHE
ST. Rm. 333, Wis. Center
CITY. 702 Langdon St.
TELE. Madison, Wis.
INST/LOC CODE

9. PUBLISHER OR SOURCE: Wisconsin: Joint Staff of the Coordinating Comm. for Higher Edu.

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	61	166

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TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR Survey

16. INDEXING TERMS (6-12)

surveys	colleges	laboratories		
higher edu.	pub. schools	administration		
bldgs. and equip.	classrooms			

17. ABSTRACT (MAX. 250 WORDS)

The third in a series of major studies of physical facilities at Wisconsin State Colleges and the University of Wisconsin, this report covers data collected in the fall of 1961.

The facility studies constitute a survey of space available in functional categories (classrooms, laboratories, offices, etc.) and an analysis of the utilization of classrooms, laboratories and, to some extent, offices. Many tables and graphs are included.

ERIC No.

18. SOURCE OF ABSTRACT Reporter No. 6

C. FUNDING DATA

19. SUPPORTING ORGANIZATION

20. DIVISION OR DEPT.

21. CONTRACT NO.

PROJECT NO.

22. TOTAL COST OF PROJECT

23. DURATION OR PROJECT

U.S. Department of Health, Education, and Welfare
Office of Education

R-6-8

8069

PHYSICAL FACILITIES SURVEY AND UTILIZATION STUDY

WISCONSIN STATE COLLEGES
UNIVERSITY OF WISCONSIN

Prepared for the Coordinating
Committee for Higher
Education in Wisconsin
by the Joint Staff
Fall 1961

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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ED000245

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INTRODUCTION

Reasons for Conducting the Study

In the spring of 1960 the Joint Staff of the Coordinating Committee for Higher Education in Wisconsin began to plan for this third major study of physical facilities at Wisconsin State Colleges, and the University of Wisconsin. The data for the two previous studies were collected in the fall of 1956-1957 school year and the fall 1958-1959 school year respectively. This data was collected in the fall of 1961, as of November 1.

These facilities studies have been composed of two general types of information. First they constitute a survey of space available in several functional categories (i.e., classrooms, laboratories, offices, auditoria, etc.). Equally as important, they include an analysis of the utilization of classrooms, laboratories, and to some extent, offices.

It is hoped that the surveys prove useful to those planning for the expansion of the eleven campuses represented in the study. They provide a biennial accounting of space added in the various functional categories which, in conjunction with projections of space needs, serve to help give sound direction to campus planning.

It is also expected that the results of the analysis of utilization of classrooms, laboratories and offices will be a useful guide to those responsible for scheduling the use of rooms, and that, aided by this analysis, the utilization of available space can be increased in line with the standards approved by the Coordinating Committee for Higher Education.

In addition to being used as a tool for promoting efficient planning and utilization, the results of the studies are used in the formula designed by the Joint Staff to integrate the building priority lists of the Wisconsin State Colleges and the University of Wisconsin.

Cautions Necessary in Interpretation

Surveys and analyses such as this one are useful as tools. However, in the complex business of planning and utilizing the complicated physical structure of a modern college or university, these data are only one of several kinds of tools used. To look for definitive answers based only on the result of this study then, will be disappointing. The kinds of programs that are being offered and which may be offered at any institution must be considered when making plans for buildings. The availability of teaching staff, the probability of great enrollment increases, the availability of land, all enter in to the problem of planning for buildings and for their utilization.

One ought also to be aware that it is possible for an institution to be in a reasonably good condition as far as one category of space is concerned and still be in an unfavorable condition with regard to another category or to total available space. Several examples might make this clear. The University of Wisconsin-Milwaukee appears to be making considerable headway in providing classroom space sufficient for its present enrollments and for at least a few years ahead. However, its library facilities are quite inadequate and its overall instructional space far below the recommended 63 feet per student enrolled. The State College at Oshkosh shows a very crowded classroom picture, but its library was so completely inadequate for its enrollment that it appeared necessary to plan for a new library and struggle through the classroom problem for some time by adapting frame houses for classroom use. When the library is completed at Oshkosh, that school will appear to be top-heavy with library space and even shorter of classroom space.

The point to be made is this, all of the space needs of an institution are not cared for at the same time. One year a classroom building is added, the next an auditorium facility, and it may be many years before another classroom building can be added. When a new building is built, then, it must be planned large enough so that it can fulfill the need for which it was planned for a number of years. This means, it is devoutly to be hoped, that for the first few years of its life, a new building ought not to be crowded to the straining point.

Perhaps the most crucial omission in this study, and one which makes caution in the interpretation of the data especially necessary, is related to the quality of the areas which are described quantitatively in the survey. This report speaks in terms of square feet of space. It treats one square foot as if it were just as good as the next square foot. This is patently untrue. Some of the area surveyed is in new buildings, much of it is in old buildings, and a sizable proportion is in temporary buildings, rented houses, or in buildings so old as to be physically uncomfortable, if not dangerous, for the occupants. All these factors dictate the use of care in using the numbers contained in this report.

Scope of the Survey

The survey of space includes all buildings on all campuses of the State

Colleges and the University of Wisconsin, except housing units, farm buildings, medical buildings, hospitals, and experimental stations. It does include temporary buildings and rented space.

Definitions

To make the parallel between the 1958 study and this one as complete as possible, definitions were not appreciably changed.

In order to acquaint the reader with the different terms used in describing the various kinds of space the following definitions are included:

1. In this study, Instructional Area includes: Classrooms, Laboratories, Offices, Libraries, Auditoriums, and Other Instructional Area. Non-Instructional Area includes: Research, Extension and Public Service, Physical Education, Laboratory Schools, Auxiliary Enterprises, Physical Plant and other active non-instructional area.
2. Classrooms. Any instructional room used chiefly for lectures, recitation, and seminar type of class meetings.
3. Laboratory. Instructional rooms equipped for a specific purpose such as chemistry experiments, food preparation and service in home economics, shop work in industrial arts, painting, music practice, etc. Adjoining space such as balance rooms, storerooms, supply rooms, dark rooms or projection rooms are included as part of the laboratory unless such rooms serve two or more laboratories.
4. Offices. A room or suite of rooms with office-type equipment that is assigned to one or more staff members for the performance of

administrative, clerical, or faculty duties other than meeting of classes. Auxiliary rooms such as waiting rooms, office file and supply rooms, interconnecting corridors within a suite of offices, private toilets and clothes closets are included as part of the appropriate offices.

5. Libraries. A room or a group of rooms used for the collection, storage, circulation, and use of books, periodicals, manuscripts, and other reading and reference materials. This category includes the general library, library offices, and rooms for special collections of documents, films or records. Smaller libraries on the departmental or college level are included in this category if they employ at least a half-time librarian. Teaching facilities for library science staff and students, even though located in the library building, are classified as instructional rooms, and excluded from the inventory of "library space".

6. Auditoriums, Theaters and Assembly Halls. Any room possessing a stage, audience seating and facilities for the purpose of presenting dramatic plays, concerts and similar events. If the seating area was used for regularly scheduled class meetings it was prorated between classrooms and auditorium space on the basis of class hours assigned.

7. Other Active Instructional Space. All instructional areas not otherwise assignable to categories previously listed. Areas which serve only one laboratory, classroom or office are included with that particular area. Other areas which serve more than one laboratory, classroom or office, or a department appear in this classification.

8. Research. Laboratories, conference rooms, materials rooms, machine rooms, etc., used for research purposes. Where space serves two or more functions, it is prorated among these functions, except that incidental amounts are disregarded. Library carrells and other library facilities directly assigned to research are included in the research area.

9. Extension and Public Service. Space for service directed to general public adult education, correspondence courses, public lectures, radio and television, state-wide service units (state chemists), public museums and exhibition rooms.

10. Physical Education. All area assignable to physical education and athletics except classrooms, offices and areas devoted to inter-collegiate athletics. Included are gymnasiums, swimming pools, locker rooms, wrestling and boxing rooms, etc. Seating areas are included to the extent that they accommodate the student body in the physical education area. Excess seating is charged to inter-collegiate athletics. For example, if a school had an enrollment of 1500 and a seating capacity of 3000, one-half the area is charged to physical education and one-half to inter-collegiate athletics in the classification of auxiliary enterprises.

11. Laboratory Schools. All areas assigned to the laboratory school function. Excluded are areas used for collegiate instruction, such as college classrooms and offices.

12. Auxiliary Enterprise. All areas devoted to revenue-producing operations such as inter-collegiate athletics, student unions, cafeterias, stores, clothing and book locker rooms, student and faculty lounges and student organization rooms.

13. Physical Plant. Areas used for plant maintenance such as carpenter shops, electrical shops, maintenance storerooms, and boiler rooms in the main heating plant. This does not include mechanical equipment rooms or janitor's closets, as these are non-assignable areas. This area represents the space devoted to the total plant maintenance and not individual buildings.

14. Other Active Non-Instructional Area. All active areas not specifically assignable to one of the previous categories.

15. Inactive Areas. All rooms that were not in use at the time of the space utilization study due to alterations or new construction. Also included are areas inactive because of condemnation.

16. Non-Assignable Floor Space. All areas which cannot be assigned to a specific agency.

    Circulatory Space. Included are corridors, lobbies, hallways, stairs and stairwells, elevators and vestibules. Waiting rooms which are walled off from the hallway and are used in conjunction with specific offices are included under office space. Waiting rooms which are a part of the corridor or vestibule are included in this category.

Rest Rooms. All public rest rooms are included. Faculty and student lounges are included in auxiliary enterprises category. Rest rooms used in conjunction with individual offices are included with the office space.

Custodial and Service Space. Included are janitorial closets, furnace and boiler rooms (except in main heating plant), pipe space areas, and mechanical equipment rooms. The central heating plant is classified as physical plant space and is not shown in this category.

Non-Usable Space. Included are such areas as attics and unfinished basements even though such space may sometimes be used for dead storage. Space which has been condemned and it is not expected that it will be returned to active use is included.

These definitions were those developed for Joint Staff Study 33, A Survey of Physical Facilities at Wisconsin State Colleges and the University of Wisconsin, Fall, 1958, a study directed by Frederick E. Schwehr. The instruments used to collect the data for this study were those prepared for the Joint Staff by Mr. Schwehr.

ENROLLMENTS

When 73,117 day students enrolled for classes in the fall of 1961, Wisconsin's public and private colleges and universities experienced their greatest numerical growth since 1955. The number represents a gain of 6,999 students - an increase of 10.6 per cent over enrollments in the fall of 1960. Public institutions enrolled a larger portion of the day students than in 1960.

Contributing significantly to the general growth of enrollments and to the increased enrollments at state-supported institutions was a gain of 2,933 students by the Wisconsin State Colleges. Whitewater and Oshkosh, for instance, gained 29.4 and 26.3 per cent respectively. The State College system gained 18.7 per cent from 1960 to 1961.

The University of Wisconsin at Madison experienced an increase of 6.9 per cent over 1960 enrollments and at Milwaukee the gain was 12.5 per cent.

The chart on the following page gives the enrollments used in the calculations made in this study.

CHART 1

Enrollments for Wisconsin State Colleges and the University of Wisconsin, Fall, 1958 and Fall, 1961

State Colleges	1958	1961
Eau Claire	1614	2217
La Crosse	1772	2042
Oshkosh	1864	2842
Platteville	1284	2018
River Falls	1285	1680
Stevens Point	1522	2104
Stout	1267	1652
Superior	1168	1436
Whitewater	1569	2586
Wis. Inst. of Tech.	331	
	13,686	18,577
University		
Madison	16,494	19,374
Milwaukee	5,191	6,336
	21,685	25,710
All Institution Total	35,371	44,287

---

[1] Day school enrollment exclusive of medical and nursing

[2] Day school enrollment exclusive of 735 full-time equivalent night students

I. CLASSROOMS

At Wisconsin State Colleges and the University of Wisconsin, there are 667.9 full-time equivalent classrooms, 316.3 at the Colleges and 351.6 at the University. Although most rooms are full-time classrooms, there is a small proportion which is used for some other function in addition to the classroom use. This compares with 580 rooms in 1958, 248 at the Colleges and 332 at the University. The list below indicates the increase or decrease in the number of rooms used as classrooms since fall 1958 in each of the institutions. The utilization of classrooms will appear lower, generally, in those institutions which have many more classrooms available in relationship to the increase in enrollments.

CHART 1a

Number of Full-Time Equivalent Classrooms Used in 1958 and 1961
At The University of Wisconsin and the Wisconsin State Colleges

Institution	Number of Full-Time Equivalent Rooms Used As Classrooms	
State Colleges	1958	1961
Eau Claire	31	45.5
La Crosse	28	32.4
Oshkosh	38	40.4
Platteville	27	41.9
River Falls	18	22
Stevens Point	27	38
Stout	18	26
Superior	26	33.02
Whitewater	26	37.1
Wis. Inst. of Tech.	9	
State College Total	248	316.3
University		
Madison	249	237.8
Milwaukee	83	113.8
University Total	332	351.6
All Inst. Total	580	667.9

In most cases new classrooms have been added by the remodeling of older buildings such as physical education buildings which have been replaced. A list of buildings added since the 1958 study is included later in this report.

There are several ways of looking at the utilization of classroom space; each way corresponds to one of the following questions that might be asked.

> How many feet of classroom space do we have for each student enrolled this year?
>
> How many feet are allowed for each seat (student station) in a classroom?
>
> How many periods a week are classrooms used?
>
> What proportion of seats are filled when the classrooms are in use?

Classrooms come in several sizes. It is always hoped that the classes taught in the rooms correspond reasonably well to the size of the room. However, it might be asked:

> What percentage of classrooms are of a given size at any institution?
>
> Does any given size of room appear to be better utilized than another size?

Classrooms are available for many hours of the day. Just how many hours they are used is dependent upon many factors, some managerial, some psychological. It is well to ask:

> What per cent of the classrooms at any given institution are in use at any given hour of the day?

Finally, since there have now been three facilities studies with six years experience, it should be possible to begin to assess trends in the development of better utilization. The question:

> What have the institutions done over the six years covered by the three studies to improve the utilization of their classroom space?

In order to provide some ready means of comparison of Wisconsin institutions with colleges and universities nationally, comparable figures from a study by James Doi and Keith Scott [1] will be presented at appropriate junctures. Later in this study a comparison of the utilization data of this study will be made with that of other states which have conducted similar studies since 1958 and which have made their studies generally available. The Doi-Scott study is especially valuable inasmuch as it represents data from 190 degree granting institutions of higher education and ranks the data for ease of comparison. It does, however, lump together a largely heterogeneous group of institutions, and so, again, comparison must be made with caution.

1. How many feet of classroom space are available for each student enrolled this year?

The average assignable square feet of classroom space available for each student enrolled, fall 1961, is 11.4, down slightly from the 1958 average. Three of the State Colleges have fewer feet per student for classrooms than they did in 1958, Oshkosh, Stevens Point and Whitewater. The others have more feet, Superior showing the greatest increase since 1958, 4 feet per student enrolled. The State College average is up only .2 of a foot from the 1958 average.

The figures for the University of Wisconsin show that the Madison campus has dropped about 2 feet per student enrolled, while the Milwaukee campus has increased by 1.8 feet. The completion of classroom buildings now under construction at the Madison campus should help to alter the picture there. Chart 2 presents the information for each institution.

---

[1] James I. Doi and Keith L. Scott. Normative Data on the Utilization of Instructional Space in Colleges and Universities. American Association of Collegiate Registrars and Admissions Officers. July, 1960.

The Doi-Scott study has shown that 19.1 feet per full-time equivalent student in classrooms is the 50th percentile ranking for degree granting institutions; that is, about half the institutions have more than 19.1 feet and half less. With 11.7 feet per student enrolled, Wisconsin institutions rank in the 90th percentile--they have fewer feet of classroom space per student enrolled than 90% of the institutions studied

2. How many feet are allowed for each seat (student station) in a classroom?

The number of assignable square feet per student station for classrooms at Wisconsin State Colleges and the University of Wisconsin is 14.0. This represents a .6 of a foot increase over 1958 figures Both the State College average and the University average are up, the former by .9 of a foot, the latter by .2 of a foot.

Several of the State Colleges show a decrease in the number of feet per student station, apparently as a result of crowding more seats into available space. Those Colleges showing a decrease are River Falls, Whitewater, Superior, and Oshkosh. Oshkosh shows the most dramatic decrease, 2.4 feet per seat.

Comparing the Wisconsin all-institutional average of 14.0 feet per student station with the Doi-Scott normative figures, shows that Wisconsin institutions place in the lowest quartile of all degree-granting institutions. In effect, Wisconsin institutions are not generous in the amout of space allowed for each seat in a classroom The median feet reported by Doi and Scott was 15.6, the lowest 10 and the highest 37.1.

The University's Madison campus seems to have an especially small number of feet per chair in classrooms; very likely this is due to the great number of fixed auditorium-like seats in a number of the major classroom buildings. In view of the wide variation in number of square feet per student station, there is some question about what might be considered a "proper" figure. Conceivably, if the mean is truly golden, the University is crowding too many seats into available space and some of the Colleges might consider the possible advantages of adding seats to some of their classrooms. At this point, however, it seems wise again to note that this study reports quantities only and that the physical aspects of rooms may often make the placing of seats difficult or the addition of seats dangerous.

Chart 3 presents the information for each institution.

3. How many periods a week are classrooms used?

The all-institutional average of 28.4 periods used per week per room for classrooms is .6 of a period less than in 1958, and 1.6 of a period lower than the standard of 30 periods per week set by the Coordinating Committee for Higher Education. On the other hand, the Wisconsin institutions show a room period use slightly better than 90 per cent of the degree granting-institutions studied by Doi and Scott.

Five State Colleges have increased their room period use since 1958, River Falls, Whitewater, La Crosse, Oshkosh, and Platteville. Oshkosh again shows the most dramatic increase, 7.3 periods per week per room.

The Madison campus of the University has increased its room period use by 3.6 periods per week per room, however the Milwaukee average has decreased by 6.3 periods per week per room.

It will be noted again later that where the room period utilization went down, this was accompanied by an increase in the number of rooms available for use.

Chart 4 presents the information for each instituion.

4. What proportion of seats are filled when the classrooms are in use?

Six state colleges now show a greater proportion of student stations utilized during regularly scheduled periods than they did in 1958, Eau Claire, River Falls, Stevens Point, Whitewater, Stout, and Superior. All other institutions show a smaller proportion than in 1958. The all institutional average is down 1.9 per cent from 1958.

Three institutions exceed the standard of 67% of student stations utilized, recommended by the Coordinating Committee, Eau Claire, Whitewater and Stevens Point.

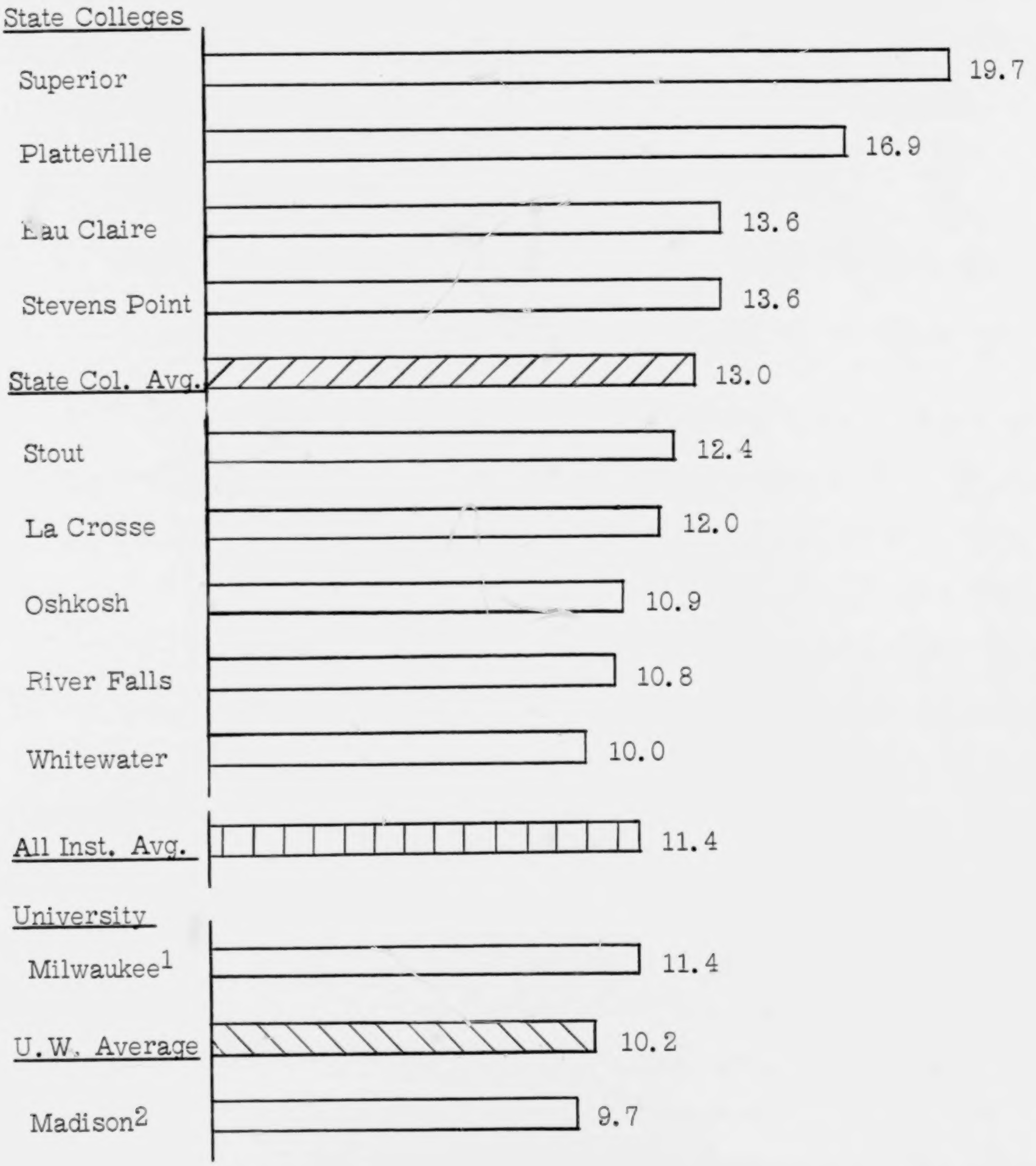
The all-institutional average of 54.6 would place Wisconsin institutions about mid-way among institutions included in the Doi-Scott study. The standards recommended by the Coordinating Committee are higher than 90% of the Institutions in the same study reached. This means that if the Coordinating Committee standards were reached, Wisconsin institutions would have very nearly the highest student station utilization found by Doi and Scott in the degree-granting institutions they studies. In view of this, and in view of studies in other states, notably California, which have pointed out the extreme difficulty of reaching 67% student station utilization, it is possible that the standards ought to be reconsidered.

There are relationships among the four kinds of data presented above which will be presented along with the comparison of factors related to utilization for the years covered by the three studies.

CHART 2

THE ASSIGNABLE SQUARE FEET OF CLASSROOM SPACE PER STUDENT ENROLLED AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961



[1] Day enrollment plus 735 full-time equivalent night students.

[2] Daytime enrollment exclusive of medical and nursing.

CHART 3

THE NUMBER OF ASSIGNABLE SQUARE FEET PER STUDENT STATION FOR CLASSROOMS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

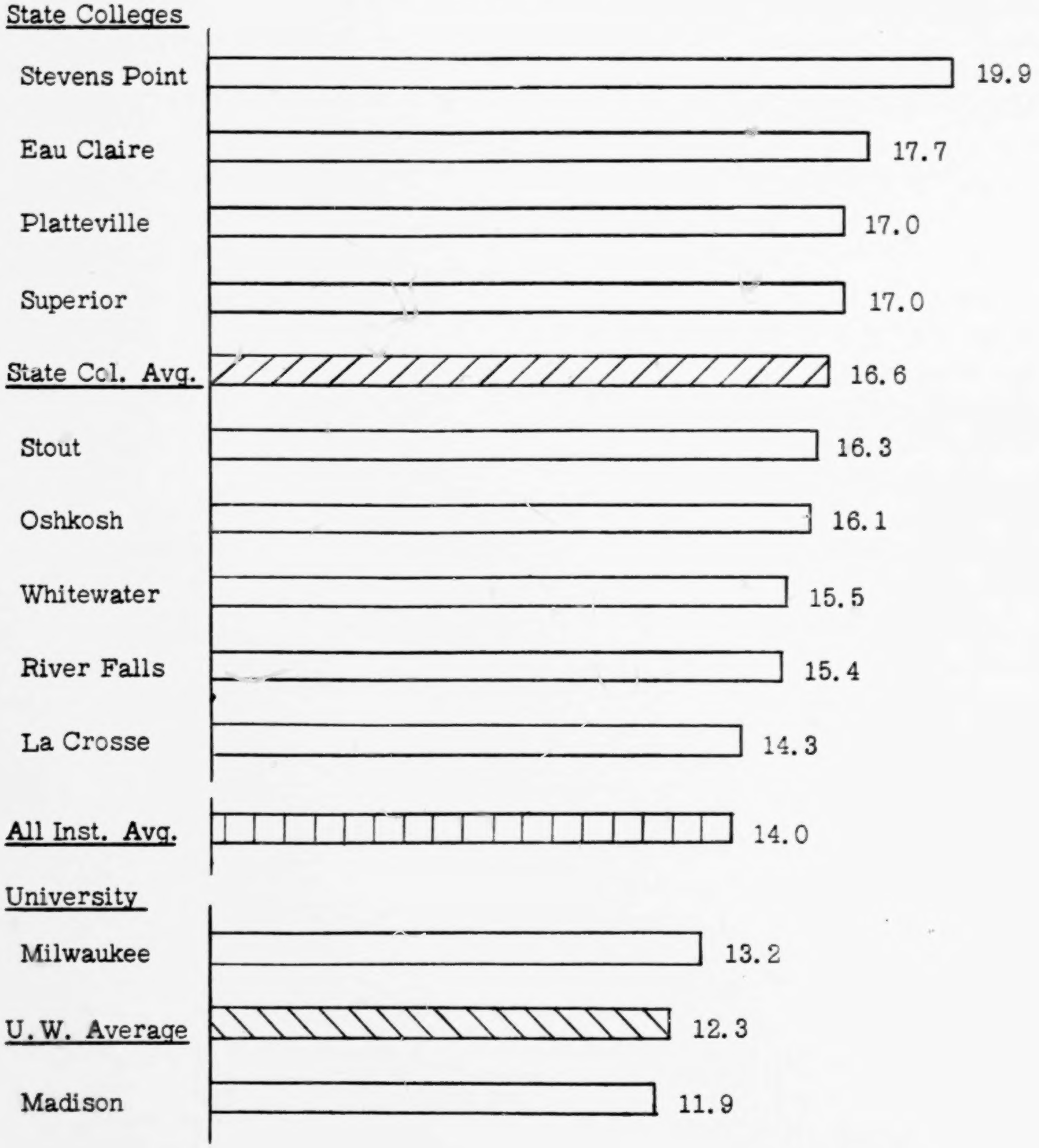
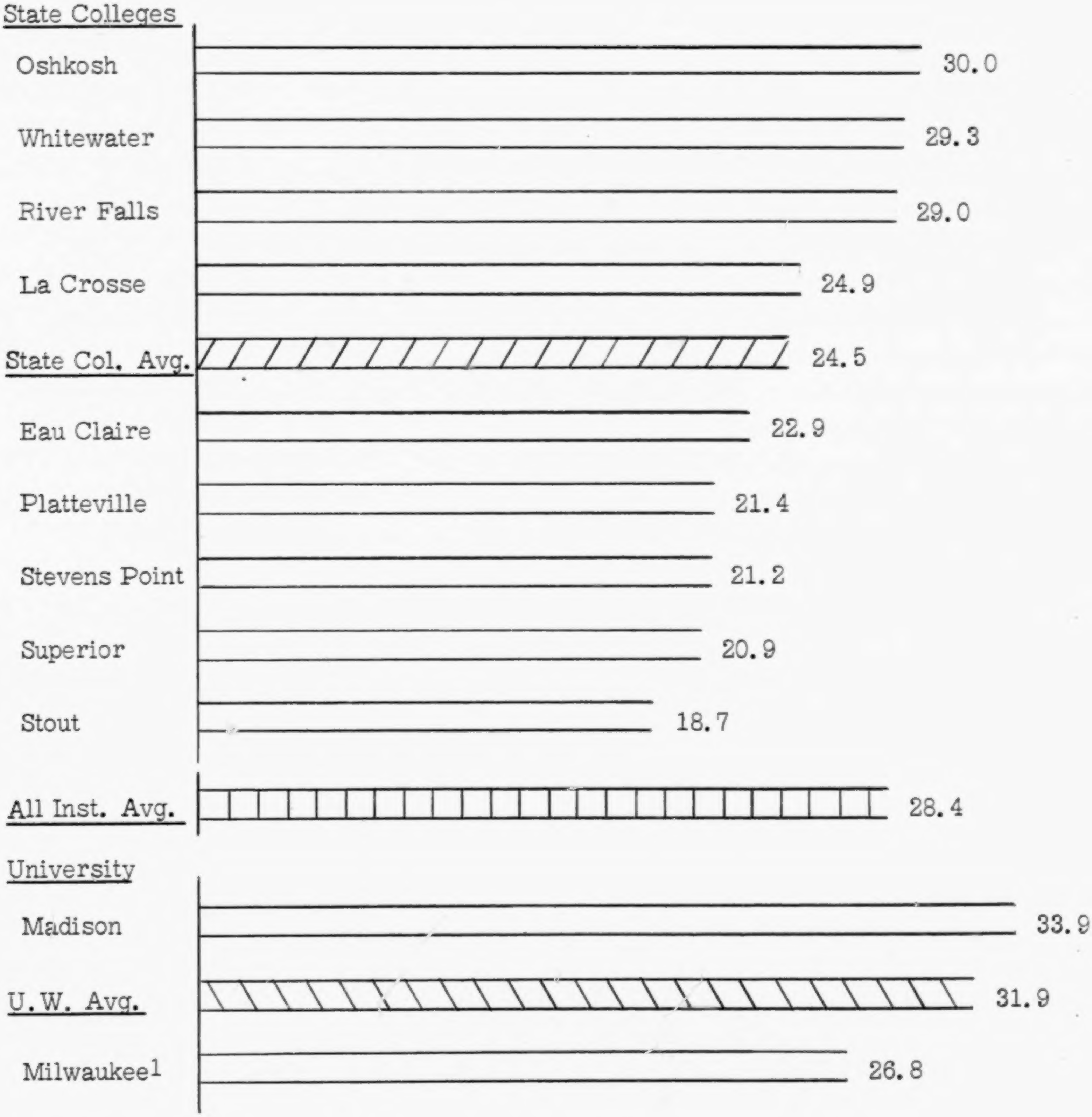


CHART 4

THE AVERAGE ROOM PERIODS USED PER WEEK PER ROOM FOR CLASSROOMS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

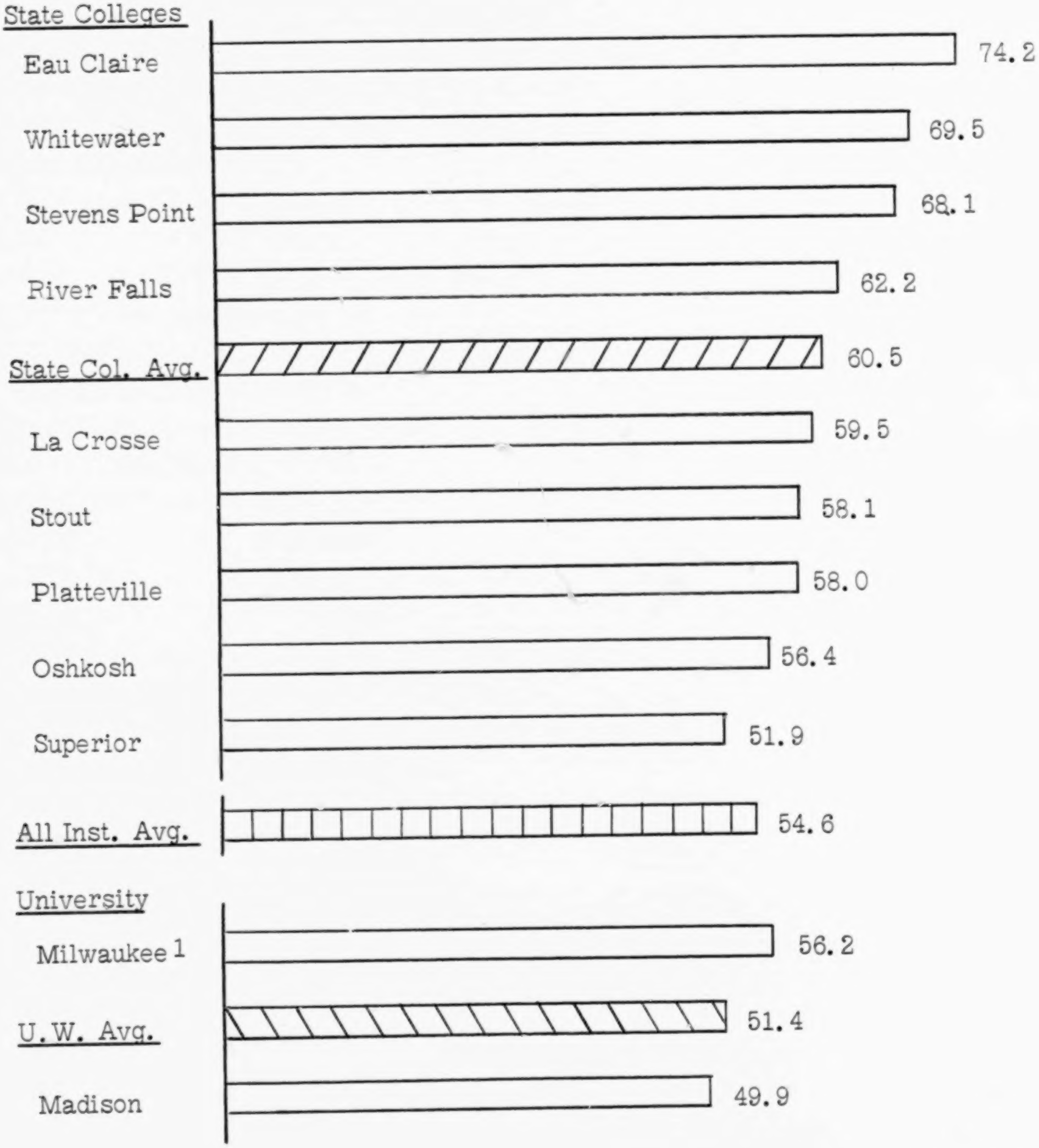


[1] Includes evening use

CHART 5

PERCENT OF STUDENT STATION UTILIZATION FOR CLASSROOMS DURING SCHEDULED PERIODS

Fall, 1961



[1] Includes evening use.

5. Does any given size of room appear to be better utilized than another size?

For purposes of this analysis, classroom sizes are defined in terms of the number of student stations in the rooms. The sizes considered are: 0-20, (probably seminar rooms) 21-50, (lecture rooms) 51-100 (large lecture rooms) 101+ (auditorium-type lecture rooms).

In all institutions the majority of rooms are of the size 21-50 student stations, although at Madison 40.4 per cent of the rooms are larger than this. The State Colleges show 70.2 per cent of their rooms in the 21-50 category and 25.5 per cent in the 51-100 category. Eau Claire, Stevens Point and Whitewater have over 80% of their rooms in the 21-50 student station category.

The small seminar type rooms are used substantially below the Coordinating Committee's recommended standard for weekly room period use at both the State Colleges and at the University of Wisconsin--Milwaukee. The small classrooms on the Madison campus are used slightly more periods per week than the standard of 30. Apparently the smaller rooms are more valuable to institutions having graduate programs which are best served by small seminar type rooms.

The State Colleges which have large (101+) classrooms use them well above the recommended standard for room period use, with the exception of Stout. Madison and Milwaukee use the large rooms slightly less than the standard, but are approaching the standard closely.

For all state colleges and the Madison campus of the University, the 51-100 size rooms achieve better room period use than the 21-50 size rooms. The opposite is true for the University of Wisconsin at Milwaukee.

Generally, the per cent of student stations utilized goes down as the size of the room increases. In smaller rooms (0-20), though the number of periods used per week is small, the per cent of seats occupied is high. It appears that student station utilization is at its best in rooms with fewer than 50 seats in them, both at the State Colleges and at the University.

The area per seat in rooms varies inversely with the size of the room, the larger rooms having the smallest area per student station and the smaller rooms having the largest area per student station. This is not an unexpected relationship.

In determining the number of different sizes of classrooms that an institution ought to have, a number of characteristics of the institution ought to be considered: The number of students the institution can expect to enroll and the kinds of programs that are planned for the students will affect the distribution of classroom sizes. Larger institutions with graduate programs or with the kinds of programs that could be expected to draw only a few students will be able to use more small rooms efficiently than will institutions with fewer "tracks" for students to follow. The policy regarding ideal class sizes in a given department will also bear on planning for room sizes. The availability of staff has a profound effect on the utilization of rooms of different sizes. It is undoubtedly less expensive to teach larger classes; but some subjects do not lend themselves to a massive lecture technique. Organization of instruction into a lecture-quiz section pattern requires sufficient small rooms to carry on effective discussion sections.

Quite possibly the answer to the question of optimum room size lies in the construction of rooms with a potential for flexibility built into them, i.e., movable partitions and use of non-bearing walls.

CHART 6

PERCENT OF CLASSROOMS OF DIFFERENT SIZES AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

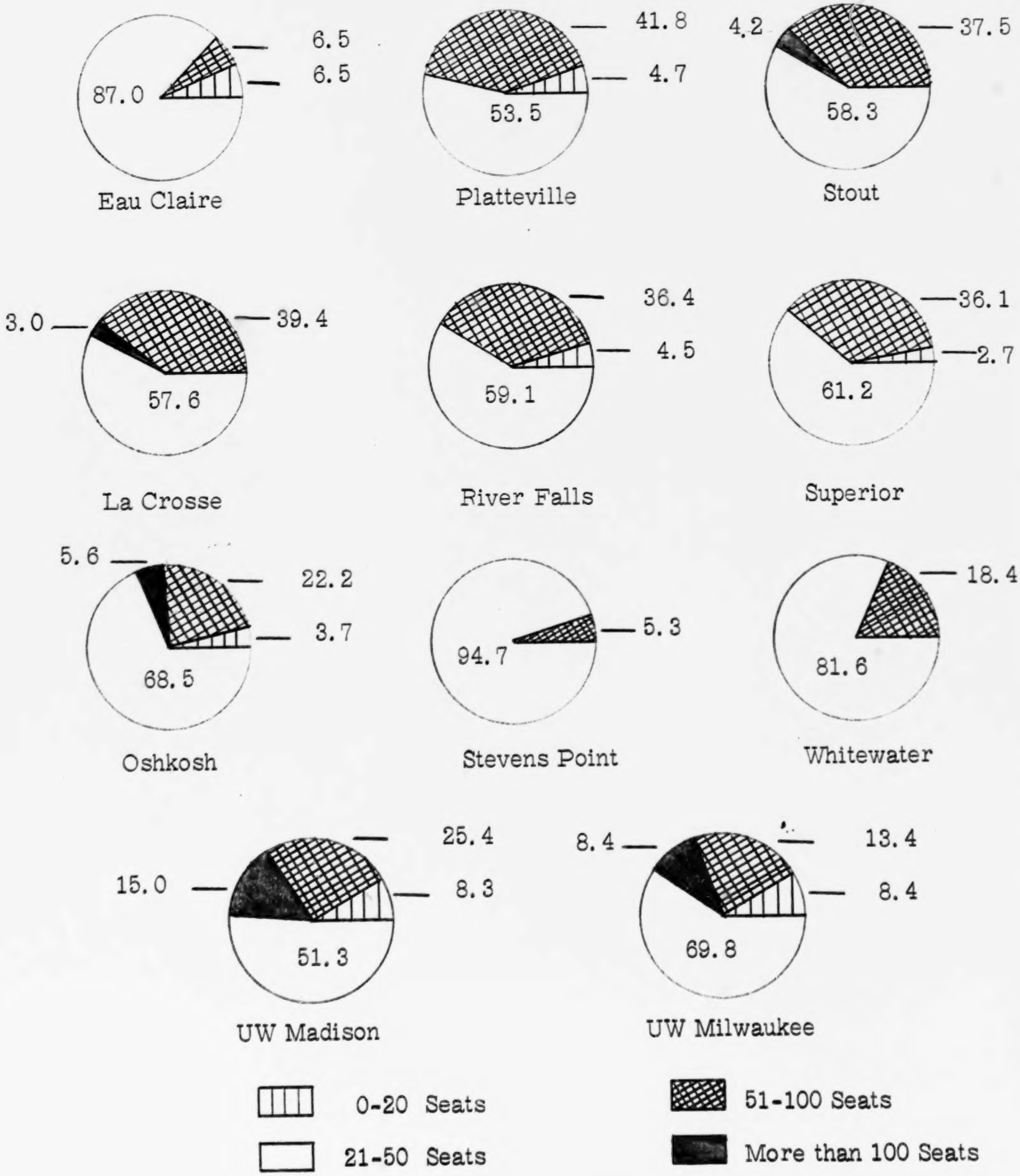


CHART 7

WEEKLY UTILIZATION OF CLASSROOMS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

STUDENT STATION CAPACITY 0-20

Institutions	Per Cent of Classrooms Capacity 0-20	Average Room Periods Used Per Week	Per Cent of Student Stations Occupied	Average Square Feet Per Student Station
State Colleges				
Eau Claire	6.5	12.0	66.5	31.3
La Crosse	--	--	--	--
Oshkosh	3.7	5.5	69.6	11.9
Platteville	4.7	4.5	88.9	67.5
River Falls	4.5	14.0	61.6	27.6
Stevens Point	--	--	--	--
Stout	--	--	--	--
Superior	2.7	4.0	90.0	36.2
Whitewater	--	--	--	--
State College Average	2.7	8.2	68.9	30.4
University				
Madison	8.3	30.4	71.8	19.3
Milwaukee	8.4	11.2	95.1	18.3
U.W. Average	8.3	24.0	76.0	18.9

CHART 8

WEEKLY UTILIZATION OF CLASSROOMS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

STUDENT STATION CAPACITY 21-50.

Institutions	Per Cent of Classrooms Capacity 21-50	Average Room Periods Used Per Week	Per Cent of Student Stations Occupied	Average Sq. Ft. Per Student Station
State Colleges				
Eau Claire	87.0	23.3	78.3	18.2
La Crosse	57.6	27.6	64.0	15.0
Oshkosh	68.5	28.5	68.2	19.2
Platteville	53.5	22.5	60.8	17.0
River Falls	59.1	28.8	62.1	16.4
Stevens Point	94.7	21.1	69.5	20.5
Stout	58.3	14.2	80.3	19.2
Superior	61.2	21.8	55.7	17.6
Whitewater	81.6	30.3	71.8	16.5
State College Average	70.2	22.7	68.5	17.9
University				
Madison	51.3	35.1	59.0	15.9
Milwaukee	69.8	28.6	61.2	14.2
U.W. Average	57.4	32.4	59.9	15.2

CHART 9

WEEKLY UTILIZATION OF CLASSROOMS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

STUDENT STATION CAPACITY 51-100

Institutions	Per Cent of Classrooms Capacity 51-100	Average Room Periods Used Per Week	Per Cent of Student Stations Occupied	Average Sq. Ft. Per Student Station
State Colleges				
Eau Claire	6.5	28.7	54.1	12.9
La Crosse	39.4	26.8	54.2	13.5
Oshkosh	22.2	36.4	53.0	13.4
Platteville	41.8	20.5	55.1	16.2
River Falls	36.4	31.1	62.3	13.9
Stevens Point	5.3	23.0	55.3	14.4
Stout	37.5	22.6	45.2	14.7
Superior	36.1	20.9	48.1	15.9
Whitewater	18.4	23.9	59.8	12.4
State College Average	25.5	25.4	53.8	14.4
University				
Madison	25.4	35.9	41.7	11.8
Milwaukee	13.4	25.9	49.4	13.3
U.W. Average	21.4	33.8	43.1	12.1

CHART 10

WEEKLY UTILIZATION OF CLASSROOMS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

STUDENT STATION CAPACITY 101+

Institutions	Per Cent of Classrooms Capacity 101+	Average Room Periods Used Per Week	Per Cent of Student Stations Occupied	Average Sq. Ft. Per Student Station
State Colleges				
Eau Claire	--	--	--	--
La Crosse	3.0	40.0	64.7	11.8
Oshkosh	5.6	33.2	32.6	11.6
Platteville	--	--	--	--
River Falls	--	--	--	--
Stevens Point	--	--	--	--
Stout	4.2	9.0	19.8	13.6
Superior	--	--	--	--
Whitewater	--	--	--	--
State College Average	1.5	23.2	43.4	12.1
University				
Madison	15.0	29.5	47.3	8.8
Milwaukee	8.4	26.6	45.2	10.5
U.W. Average	12.8	28.2	46.9	8.9

6. What per cent of the classrooms are in use at any given hour of the day?

An analysis of the number of room periods used per week is made more meaningful by the knowledge of the hours of the day during which utilization is high or low. The following tables present this information for each institution.

Ideally the best use of available rooms is achieved when a high proportion of the rooms are in use for many hours of the day. Actually, it is often possible to find "fade-out" hours and "fade-out" days when utilization of rooms goes down. Early morning hours, noon hours, and late afternoon hours often are "fade-out" periods. Friday afternoons and to some extent Monday mornings often constitute "fade-out" days.

It will be noticed that some colleges do not appear to have made as much headway in evening out the percent of rooms used each hour of the day as have other colleges. In every instance this failure is accompanied by an increase in the number of rooms available for use. Apparently the increase in students at these colleges was handled by having available a greater number of rooms, whereas in other colleges the increase required a heavier scheduling of rooms.

Several of the State Colleges increased the per cent of rooms used by adding an extra hour on to their regular daily schedule, however Platteville and Superior appear to have shortened their day by one hour. Almost all of the Colleges have evened out their daily schedule to hasten the trend toward eliminating fade-out hours. Oshkosh is the college which shows the greatest increase in rooms used each hour, in use of Saturday classes and in use of evening classes.

The University of Wisconsin-Madison has generally increased the per cent of rooms used every hour as well as its Saturday and evening schedule. Milwaukee has increased its use of rooms the 10th, 11th, and 12th periods, but decreased its very late evening usage. Milwaukee has also made strides in eliminating the fade-out supper hour and first periods.

CHART 11

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT EAU CLAIRE STATE COLLEGE[1]

Fall, 1961

44 Classrooms

Period	M	T	W	TH	F	S
1	82	30	82	30	75	0
2	86	55	84	57	75	18
3	75	77	30	75	07	18
4	61	30	61	27	57	18
5	50	20	50	23	43	0
6	82	36	80	36	73	0
7	80	39	77	41	66	0
8	68	39	70	41	68	0
9	09	09	09	09	14	0
10	0	0	0	0	0	0
11	02	0	0	0	0	0
12	02	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

[1] These represent rooms which are used for classroom purposes only. Rooms which served more than one function are excluded.

CHART 12

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT LA CROSSE STATE COLLEGE

Fall, 1961

31 Classrooms

Period	M	T	W	TH	F	S
1	58	38	58	38	54	0
2	83	67	74	80	61	0
3	77	93	77	83	86	0
4	74	70	77	77	86	0
5	54	35	51	35	32	0
6	26	29	26	35	42	0
7	86	54	86	70	77	0
8	74	51	74	61	77	0
9	45	38	42	42	32	0
10	0	0	0	0	0	0
11	0	03	0	03	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 13

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS
AT OSHKOSH STATE COLLEGE

Fall, 1961

38 Classrooms

Period	M	T	W	TH	F	S
1	75	70	49	60	83	13
2	68	60	55	65	52	16
3	83	34	94	49	88	16
4	57	34	49	31	55	08
5	62	44	68	42	73	03
6	68	44	57	39	65	0
7	44	42	31	42	57	0
8	65	60	52	60	68	0
9	79	60	68	55	86	0
10	44	31	21	26	26	0
11	0	08	03	03	0	0
12	03	03	0	0	0	0
13	03	03	0	0	0	0
14	03	03	0	0	0	0

CHART 14

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT PLATTEVILLE STATE COLLEGE

Fall, 1961

43 Classrooms

Period	M	T	W	TH	F	S
1	88	42	88	32	79	09
2	79	49	81	44	81	09
3	70	39	63	46	63	09
4	70	46	70	42	60	09
5	28	19	28	23	21	09
6	58	44	60	46	51	0
7	63	32	63	30	60	0
8	49	21	49	21	35	0
9	0	05	07	05	0	0
10	0	03	0	03	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

C H A R T 15

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT RIVER FALLS STATE COLLEGE

Fall, 1961

22 Classrooms

Period	M	T	W	TH	F	S
1	73	78	73	45	73	0
2	73	66	78	39	78	0
3	82	91	78	64	64	0
4	73	75	73	52	73	0
5	55	70	59	34	64	0
6	64	50	64	36	59	0
7	45	68	18	68	55	0
8	86	55	86	78	73	0
9	59	50	59	68	41	0
10	05	18	11	14	05	0
11	0	05	0	05	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 16

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT STEVENS POINT STATE COLLEGE

Fall, 1961

38 Classrooms

Period	M	T	W	TH	F	S
1	63	58	40	66	29	0
2	82	84	37	79	29	0
3	68	29	66	29	68	0
4	55	26	55	32	50	0
5	21	45	26	50	47	0
6	32	58	32	53	58	0
7	71	26	68	29	61	0
8	71	29	66	29	66	0
9	32	26	26	32	18	0
10	0	3	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 17

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS
AT STOUT STATE COLLEGE

Fall, 1961

23 Classrooms

Period	M	T	W	TH	F	S
1	35	17	30	17	30	0
2	82	43	82	43	65	0
3	61	69	13	65	26	0
4	43	35	56	35	35	0
5	30	22	30	22	13	0
6	65	52	69	48	61	0
7	65	39	61	26	48	0
8	56	43	39	39	30	0
9	69	39	61	39	43	0
10	04	04	04	04	04	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 18

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT SUPERIOR STATE COLLEGE

Fall, 1961

32 Classrooms

Period	M	T	W	TH	F	S
1	31	84	19	84	84	0
2	90	50	78	47	90	03
3	87	16	81	87	0	03
4	78	31	81	31	75	03
5	34	69	22	62	59	0
6	81	40	66	78	37	0
7	25	59	66	25	53	0
8	0	0	0	0	0	0
9	03	03	0	03	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	06	03	0	0	0	0
13	03	03	0	0	0	0
14	03	0	0	0	0	0

CHART 19

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS AT WHITEWATER STATE COLLEGE

Fall, 1961

37 Classrooms

Period	M	T	W	TH	F	S
1	43	78	28	78	78	16
2	59	86	48	89	81	16
3	91	08	91	08	91	16
4	89	86	43	89	46	0
5	70	70	40	70	48	0
6	89	89	16	86	24	0
7	89	59	89	59	89	0
8	89	54	81	57	84	0
9	59	62	05	62	0	0
10	03	03	03	03	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 20

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS

AT UW MADISON

Fall, 1961

235 Classrooms

Period	M	T	W	TH	F	S
1	83	74	83	70	76	14
2	91	88	91	88	90	28
3	90	86	89	86	85	30
4	89	87	86	89	86	22
5	56	57	57	57	52	.43
6	90	75	90	77	83	1
7	85	70	83	73	76	.43
8	64	63	62	65	47	.43
9	27	25	33	29	16	.43
10	3	3	4	4	1	.43
11	8	10	8	8	.43	0
12	6	6	5	6	.43	0
13	1	1	2	1	.43	0
14	.43	.43	.43	.43	.43	0

CHART 21

PERCENT OF ROOM PERIOD USE OF 100% CLASSROOMS
AT UW MILWAUKEE

Fall, 1961

111 Classrooms

Period	M	T	W	TH	F	S
1	64	47	65	45	49	1
2	71	60	73	60	63	4
3	75	56	77	60	60	4
4	66	59	68	60	59	4
5	59	46	60	48	49	0
6	69	52	68	48	52	0
7	68	54	67	46	53	0
8	45	29	45	29	33	0
9	23	17	17	14	10	0
10	22	28	23	24	5	0
11	41	45	48	27	1	0
12	56	57	58	42	2	0
13	13	2	8	6	4	0
14	0	0	0	0	1	0

7. What have institutions done over the past six years to increase utilization?

The following charts, perhaps the most significant for purposes of understanding the several factors that combine to make good utilization, compared the findings of the three utilization studies conducted to date by the Joint Staff. They include five kinds of information: The average number of student stations per room, the average number of square feet per student station, the per cent of student stations utilized, the average room periods used per week per room, and the average number of seats occupied per week per room.

At this point it will be well to examine the interrelationships among these several measures.

Generally, it could be expected that as the number of student stations per room increases, the number of square feet per station would decrease and that as the number of stations decreases, the number of feet per station would increase. Changes in the average number of student stations per room could be due either to the simple addition of chairs in available rooms or to the construction of larger classrooms with more chairs in them.

In almost every case, examination of the data shows that when the number of student stations per room is decreased, the per cent of student stations utilized is increased (fewer seats per room, or smaller rooms-more of the seats filled.) The major exception to this observation is the University of Wisconsin-Madison which shows a decrease in the average number of student stations per room and a decrease in the per cent of student stations utilized. Madison, however, has increased the average number of periods used per week per room.

The data shows that when the number of student stations per room is increased, the per cent of student stations utilized is decreased. This is true unless the number of hours a room is used per week is decreased, in which case the student stations utilized will increase (more seats per room, fewer seats filled, unless the room is used fewer hours per week, in which case more seats will be filled each hour it is used.) The great exception to this observation is Whitewater which has increased the number of seats per room, increased the per cent of seats filled, increased the number of periods per week a room is used and increased the average number of seats filled per week per room... all this even while adding eleven rooms.

The study shows that when the number of periods per week a room is used is cut, the per cent of student stations utilized goes up, unless many more classrooms have been added. (Fewer periods a week--more seats filled; if more rooms have been added, fewer periods per week, fewer seats filled). Milwaukee shows a cut in room periods used per week per room, a cut in percent of student stations utilized and a cut in the average student stations occupied per week per room. This, however, is understandable when considered along with an increase in classrooms from 83 to 113.8.

A decrease in the average number of seats occupied per week per room is usually accompanied by a cut in the average number of periods per week per room, or by a substantial increase in the number of available classrooms. Eau Claire provides an example of this phenomenon. An increase in the average number of seats occupied per week per room is achieved by either increasing the average number of periods used per week per room or increasing the percent of student stations utilized. River Falls provides an example of this phenomenon.

The comparison of the five factors related to utilization indicates clearly crowded conditions of classrooms at Oshkosh, Whitewater, and the Madison campus of the University.

Although the remaining institutions have not reached the standards recommended by the Coordinating Committee for the use of classrooms, this does not necessarily mean that they are not crowded for instructional space. It is likely that new construction or, and in most cases, remodeling has made it possible for many of the colleges and the Milwaukee campus of the University to handle more students than they presently have in the classrooms they now have though they may be quite crowded in library, teaching laboratory, or other instructional facilities. Again, however, it must be recalled that this study is one of quantity of space, not quality, and that the great inundation of students has not yet begun to hit the campuses.

C H A R T 22

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT EAU CLAIRE STATE COLLEGE

Fall 1956, 1958, and 1961

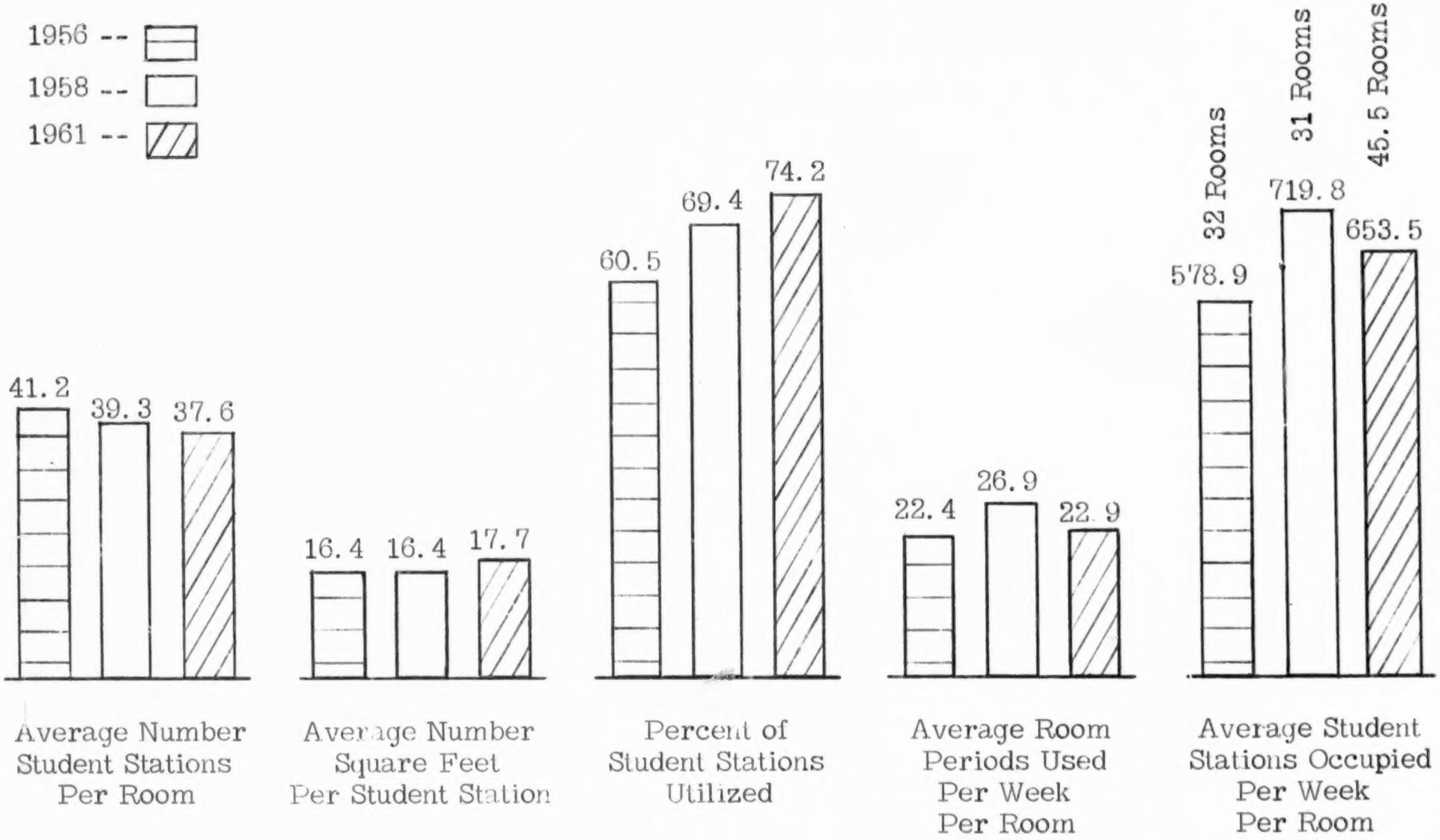


CHART 23

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT LA CROSSE STATE COLLEGE

Fall 1956, 1958, and 1961

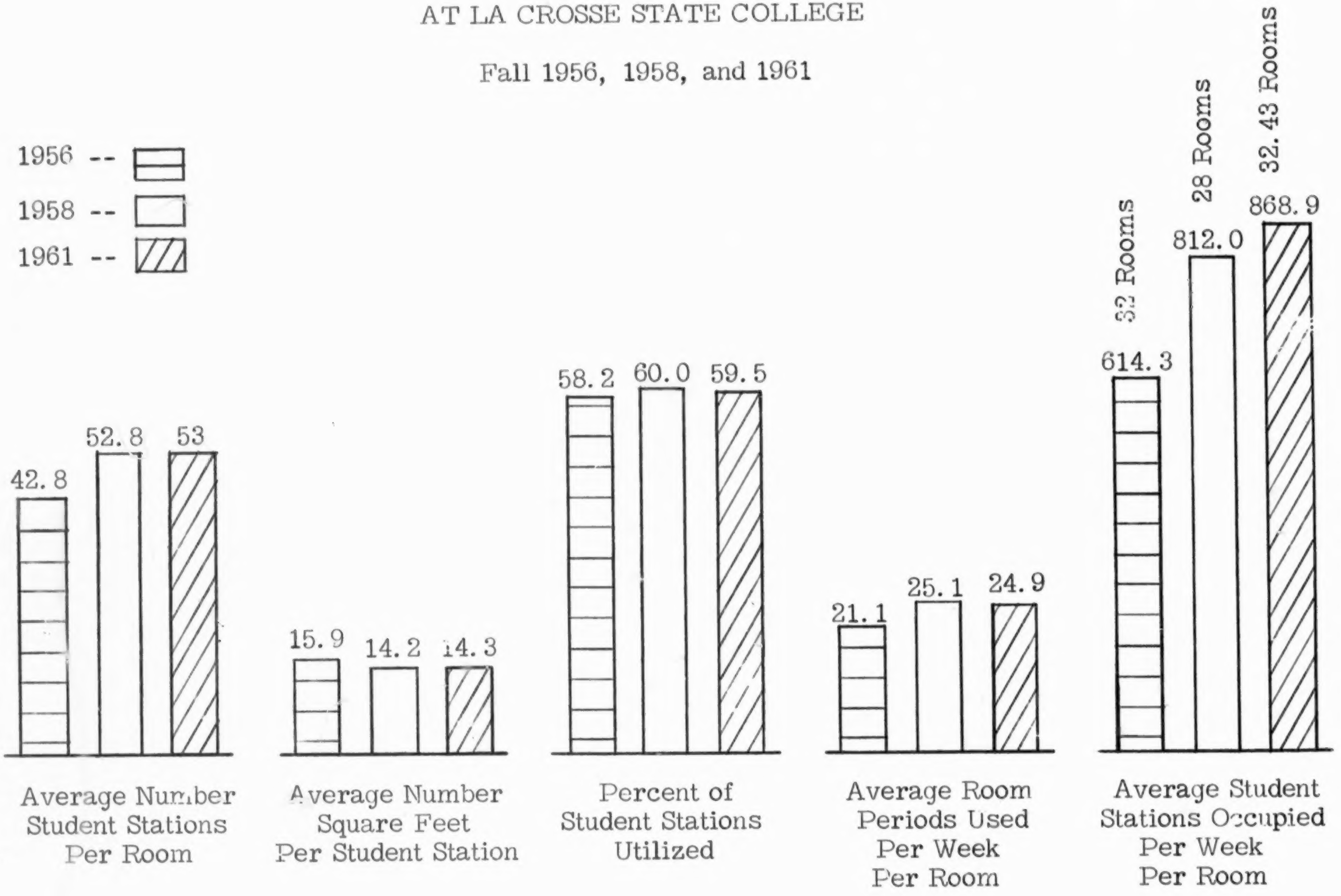


CHART 24

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT OSHKOSH STATE COLLEGE

Fall 1956, 1958, and 1961

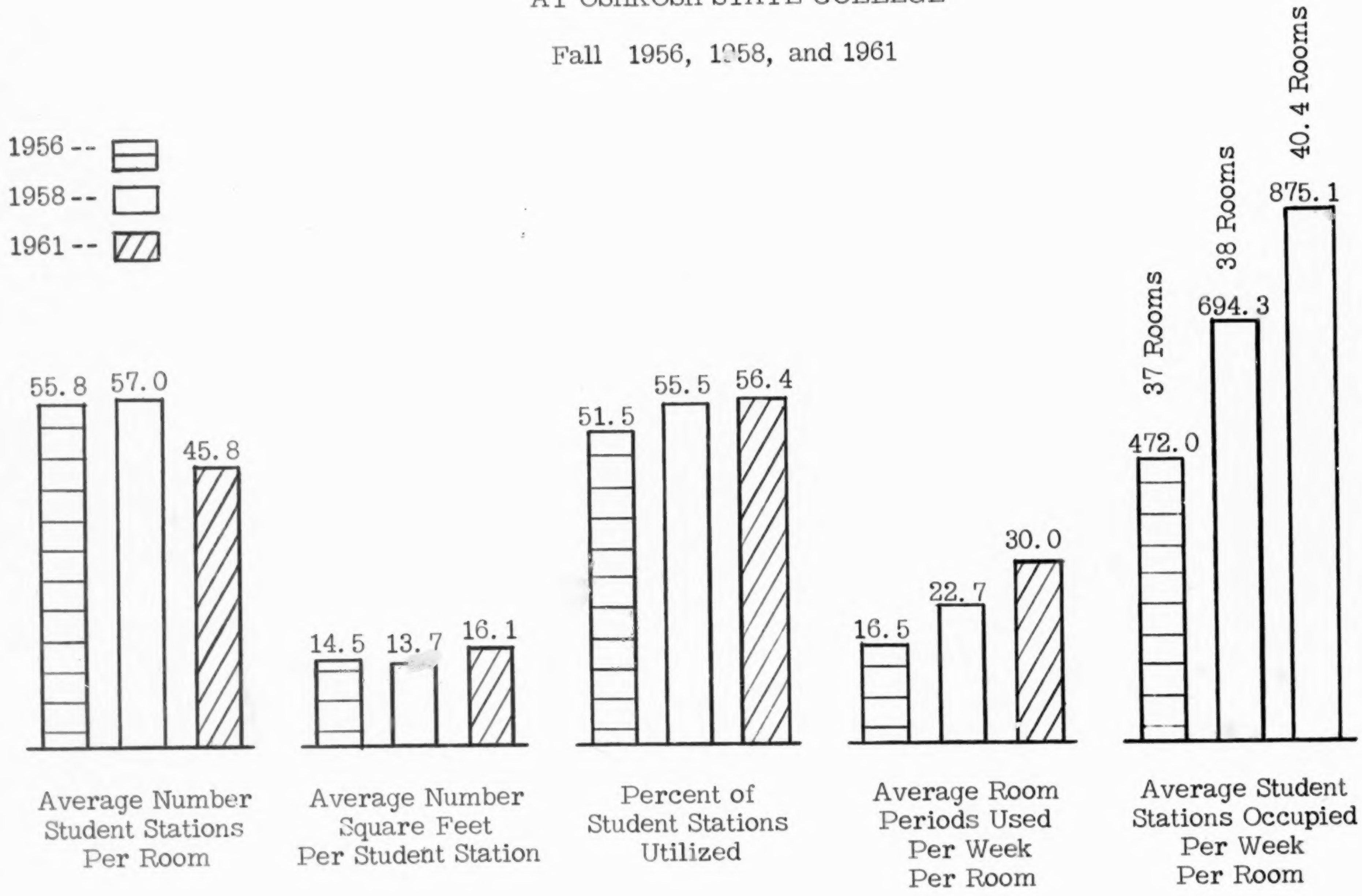
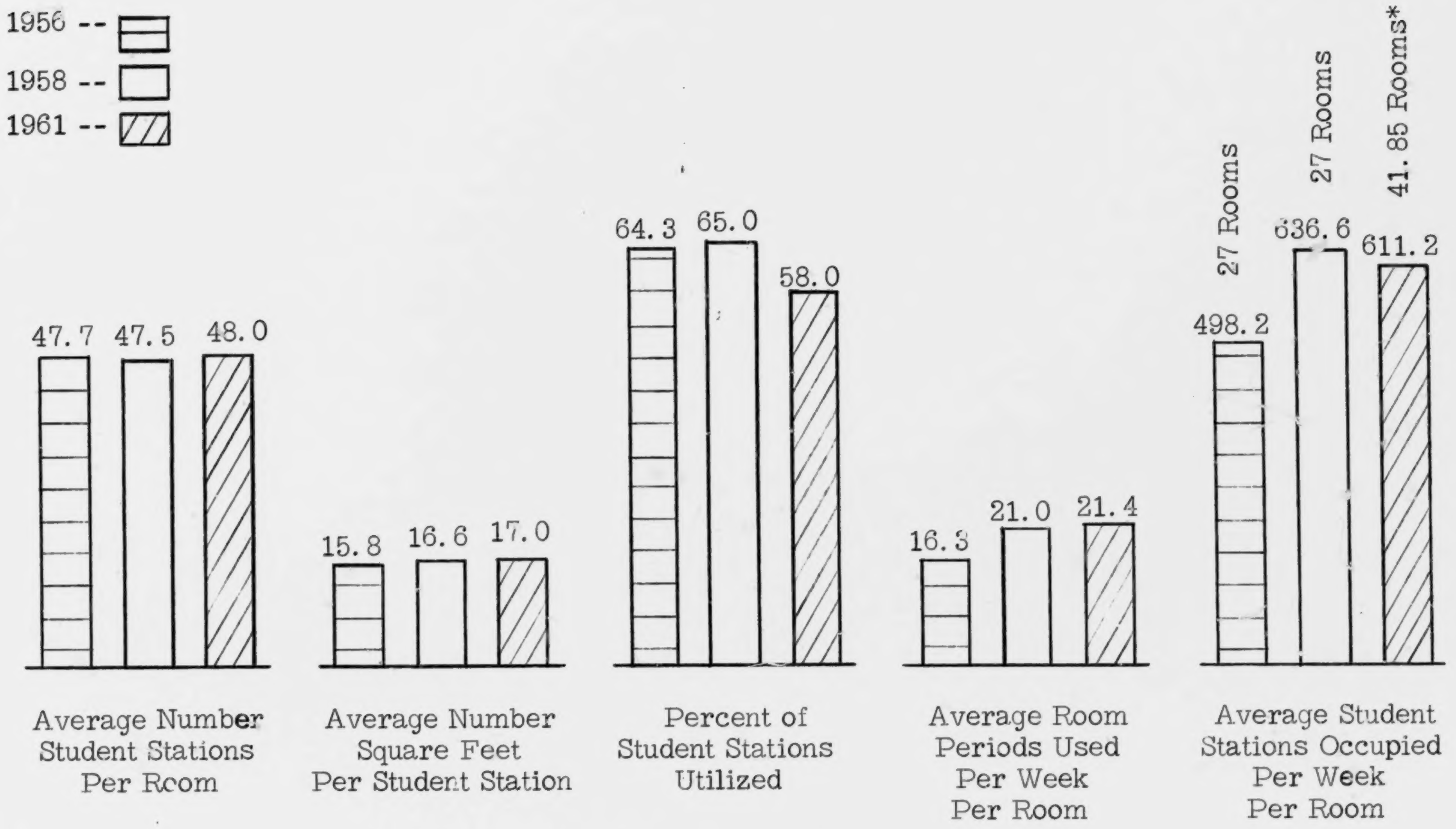


CHART 25

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT PLATTEVILLE STATE COLLEGE

Fall 1956, 1958, and 1961



* Platteville State College and the Institute of Technology have merged.

CHART 26

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT RIVER FALLS STATE COLLEGE

Fall 1956, 1958, and 1961

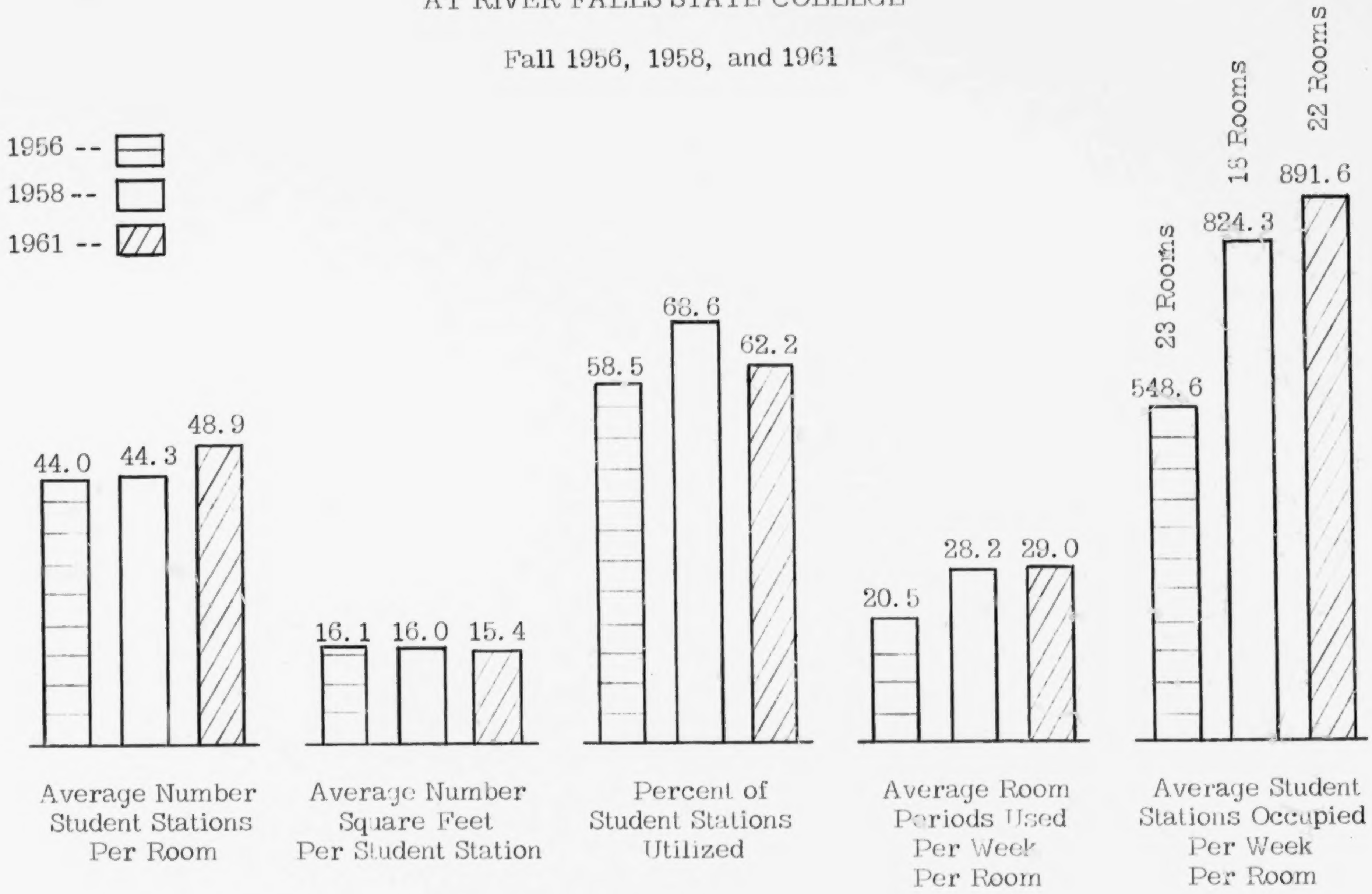


CHART 27

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT STEVENS POINT STATE COLLEGE

Fall 1956, 1958, and 1961

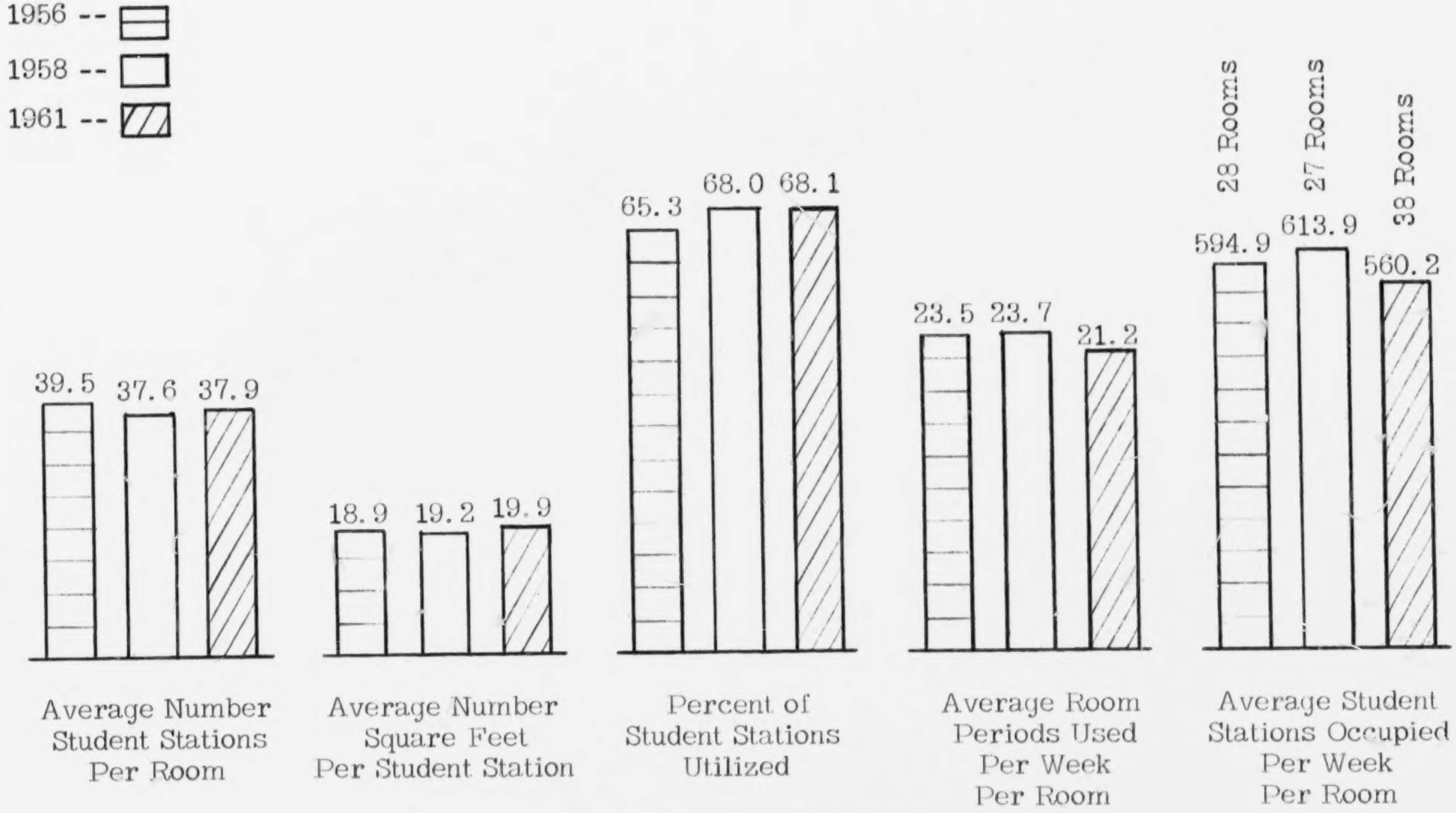


CHART 28

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT STOUT STATE COLLEGE

Fall 1956, 1958, and 1961

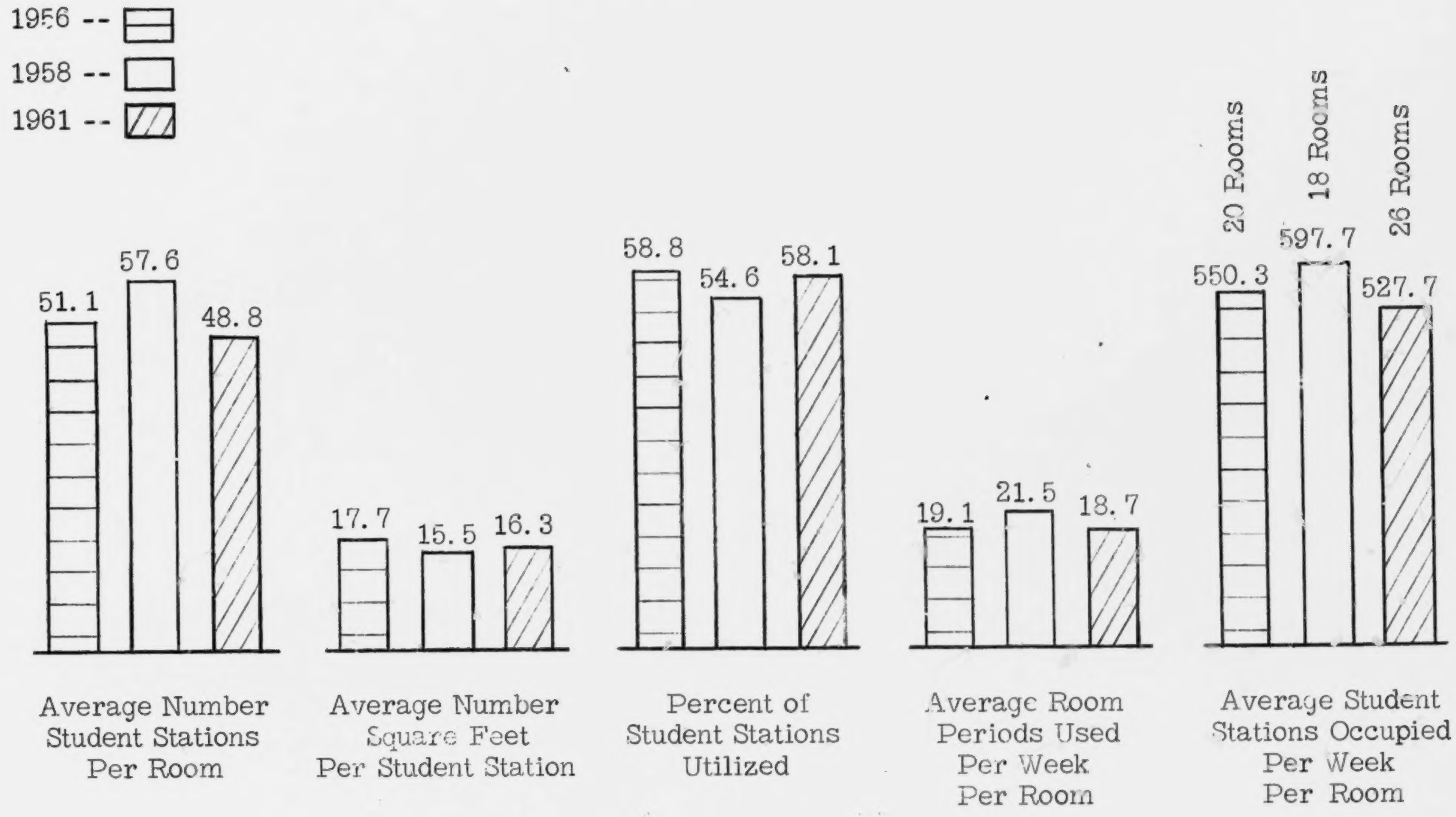


CHART 29

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT SUPERIOR STATE COLLEGE

Fall 1956, 1958, and 1961

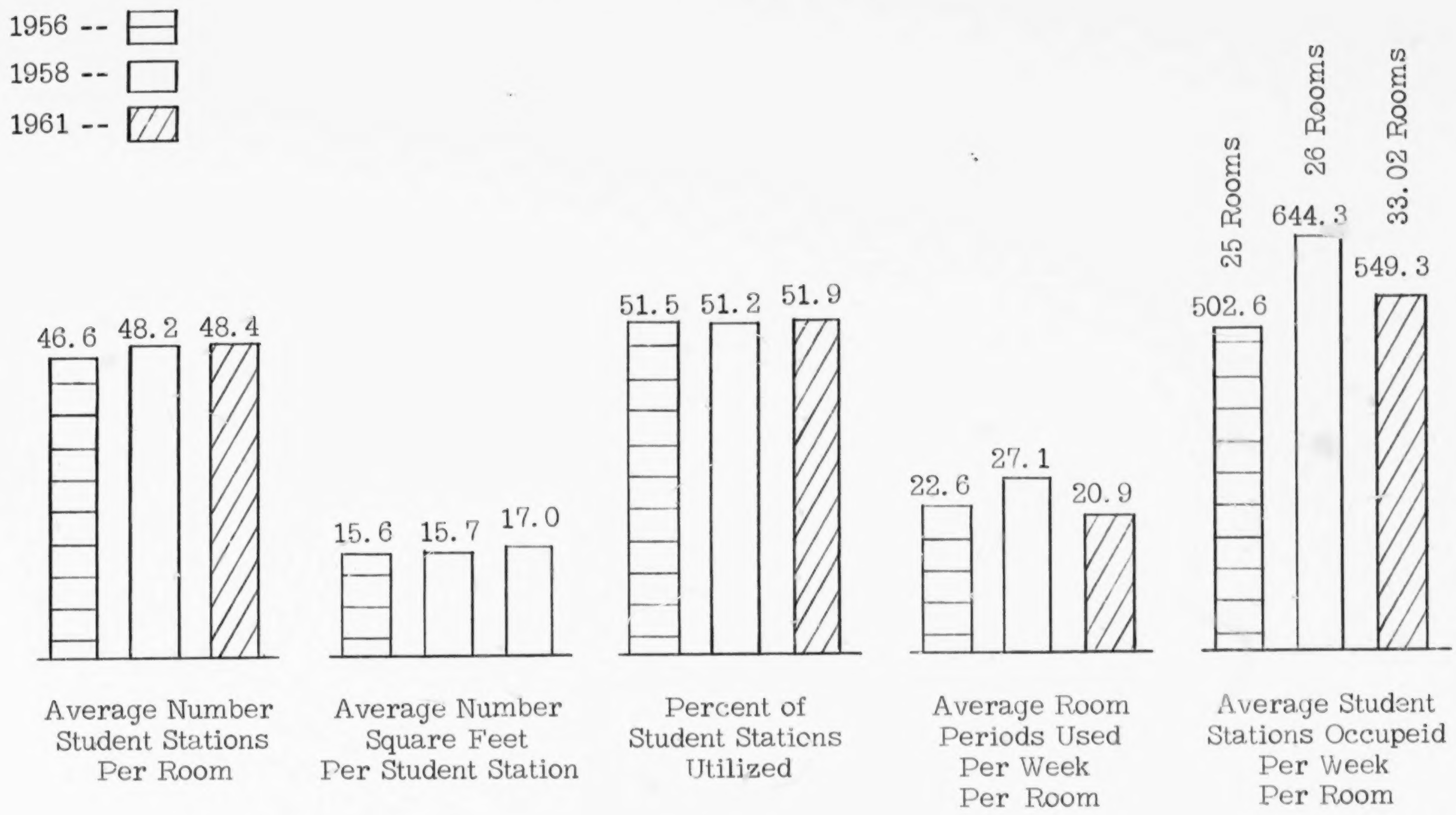


CHART 30

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT WHITEWATER STATE COLLEGE

Fall 1956, 1958, and 1961

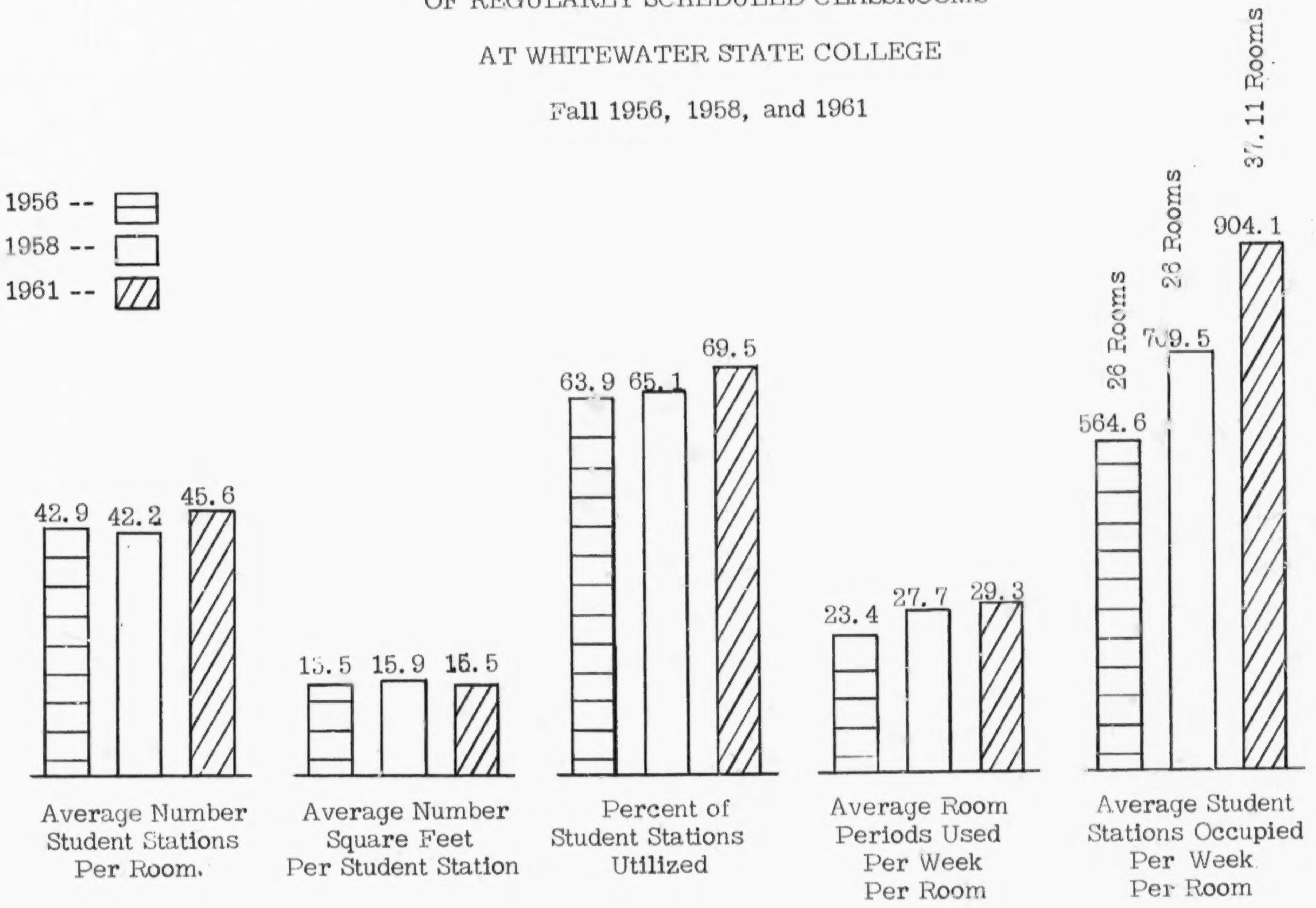


CHART 31

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT THE UNIVERSITY OF WISCONSIN, MADISON

Fall 1956, 1958, and 1961

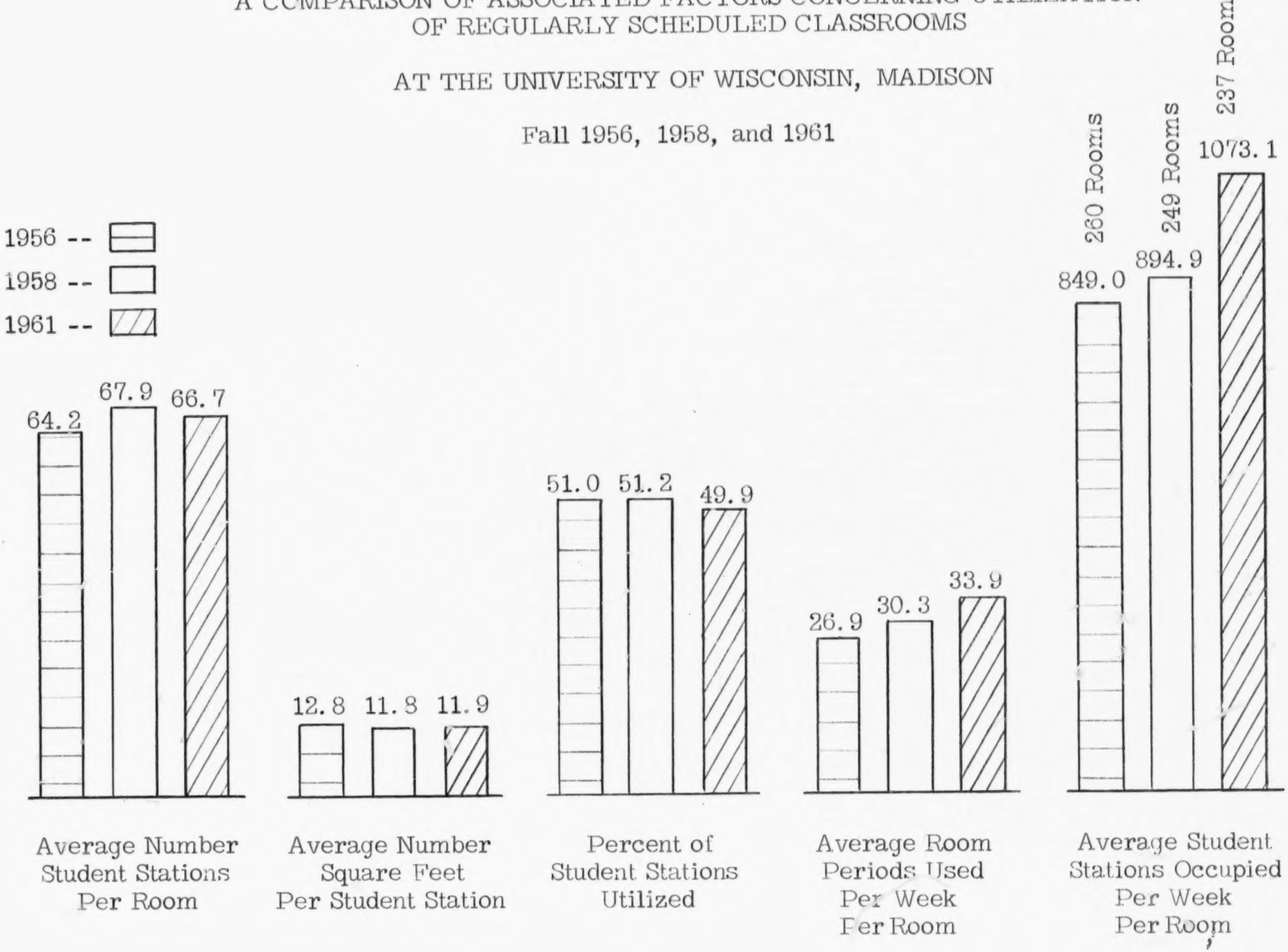
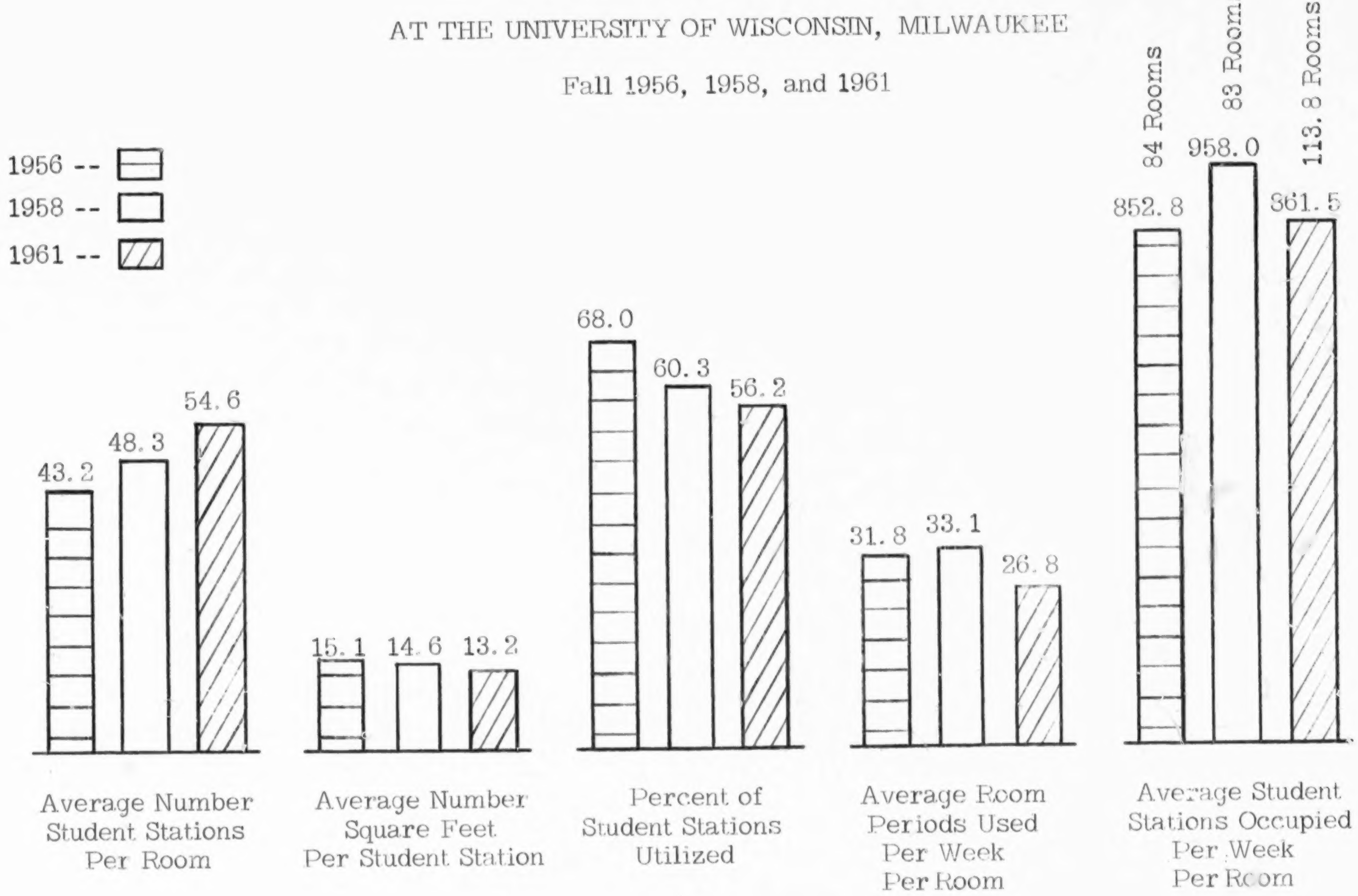


CHART 32

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED CLASSROOMS

AT THE UNIVERSITY OF WISCONSIN, MILWAUKEE

Fall 1956, 1958, and 1961



8. Approximately how many more students than are presently enrolled can the present classroom facilities accommodate?

To determine the capacity of the present classroom facilities, the number of student stations available was multipled by 30 (the number of hours per week each classroom should be used according to CCHE recommended standards) and then multiplied by .67 (the recommended standard for student station utilization). The resultant figure was divided by the actual number of hours a week that each student spends in classrooms. This number will vary from institution to institution depending on curriculum emphasis. The result of these computations is an approximation of the capacity of present classroom facilities in the light of CCHE recommended standards.

The Joint Staff estimated the year in which each institution might be expected to reach the capacity of its classrooms. Considering the time it takes to construct new facilities, these classrooms will very likely be three or four years in planning and construction before they can be occupied. Thus, laboratories approved in 1962 will not be available for use until 1964 or 1965. Chart 33 shows the year preceding the year in which the classroom capacity may be reached. It will be noted that all institutions except Stout and Superior show a need for classrooms before 1965. These new classrooms, then, must be approved in the coming biennium if they are to be available before the capacity of present classrooms is reached. Eau Claire, River Falls, Whitewater, Oshkosh and Madison are either presently in need of classrooms or will have reached capacity next year.

Classroom buildings are presently under construction in Madison, and River Falls is remodeling its old physical education facility into classrooms.

Two cautions are in order to aid in interpreting this data. First, as measured against the Doi-Scott normative data the standards set by the Coordinating Committee for Higher Education if achieved would result in a higher utilization than most of the institutions in that study. Secondly, classrooms are only one category of instructional space at an institution of higher education, and a lack of need in one area does not imply that other areas may not be crowded.

CHART 33

AN ESTIMATE OF THE POTENTIAL NUMBER OF STUDENTS THAT CAN BE ACCOMMODATED BY PRESENT CLASSROOMS UNDER THE RECOMMENDED STANDARDS

Institutions	Number of Student Sta.	Hours[1] Spent by Each Stu. in C. R.	Estimated Capacity[2]	Estimated Year Before Capacity Is Reached[3]
Eau Claire	1,729	13.9	2,488	1962
La Crosse	1,750	14.2	2,672	1964
Oshkosh	2,474	14.0	3,534	1963
Platteville	2,062	13.9	2,967	1965
River Falls	1,076	12.2	1,764	1961
Stevens Point	1,440	12.1	2,380	1963
Stout	1,221	9.5	2,571	1966
Superior	1,744	14.1	2,474	1967
Whitewater	1,733	13.0	2,666	1961
Madison	15,953	14.3	21,419	1963
Milwaukee	6,494	16.0	8,118	1964

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[1] This number represents actual hours spent in classrooms, not credit hours.

[2] Based on Coordinating Committee for Higher Education standard--30 hours per week per room with 67% of student stations occupied.

[3] Estimates based on 1956-61 enrollment experience.

II. TEACHING LABORATORIES

There are 465.4 full-time equivalent teaching laboratories at the Wisconsin State Colleges and the University of Wisconsin, 221.1 at the Colleges and 244.32 at both campuses of the University. At the University of Wisconsin-Madison, many of these rooms are used part time as research laboratories and so are prorated to two functions. The change in the number of full-time equivalent teaching laboratories since the 1958 physical facilities study is represented in Chart 34 below.

Most of the institutions have increased the number of rooms used as laboratories. La Crosse and Whitewater, however, show little increase, and Milwaukee shows a .8 of a room decrease. Stout has added a shop laboratory since the 1958 survey and Superior has added a science building. Milwaukee has also added a science building into which it has moved most of the science laboratories formerly housed in other buildings. The former laboratory space has since been converted into classrooms, or is presently being remodeled for use in some other function. Madison has added 21 rooms as laboratories, but since most of these are prorated as research laboratories, the increase in teaching laboratory space amounts to only 8 full-time equivalent rooms.

All institutions except La Crosse and Madison show an increase in the number of student stations available in teaching laboratories. La Crosse has very few teaching laboratories and some have been made by remodeling a large light court, which may account for the presence of fewer stations. For many of the laboratories in Madison it is often difficult to account for student stations with any accuracy. For instance, the engineering department has several laboratories which house large machines around which students crowd during the laboratory course. There are no specific stations assignable to each student, hence the difficulty in determining a capacity figure for those laboratories. This may in part account for the smaller number of student stations available now than in 1961. The fact that Madison, as most other institutions, shows a trend toward a greater number of square feet per student station (probably reflecting the increase in amount and complexity of laboratory equipment) may also account for the presence of fewer stations in Madison.

In determining the total number of assignable square feet devoted to teaching laboratories, consideration had to be given to the preparation rooms that constitute an important part of most laboratories. It was decided that if a preparation room served only one laboratory it was to be considered as part of that laboratory. However, if a preparation room served two or more laboratories it was to be considered as "other active instructional space." This method of handling these important rooms creates some problem in evaluating the laboratory data. It must be borne in mind that it is possible to have sufficient space for students to work in the laboratory proper, but be quite short of laboratory preparation space.

In respect to the utilization of teaching laboratories, it should be noted that the recommended standards are that each room be used 24 periods per week with 80 per cent of the student stations occupied. Teaching laboratories, however, pose special utilization problems. General science laboratories which are required by the kind of program taken by most undergraduate liberal arts students can generally be expected to show a high utilization pattern, both from the point of view of the number of room periods used per week and the per cent of student stations utilized. On the other hand, laboratories required by special types of programs which have small enrollments will be used less than general all-purpose laboratories.

CHART 34

NUMBER OF FULL-TIME EQUIVALENT TEACHING LABORATORIES USED IN 1958 AND 1961 AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

	1958	1961
State Colleges	Number of FTE Labs.	Number of FTE Labs.
Eau Claire	14.1	22.8
La Crosse	11.0	11.6
Oshkosh	16.4	24.8
Platteville	21.9	38.4
River Falls	15.5	22.8
Stevens Point	15.7	19.2
Stout	29.0	38.9
Superior	10.8	22.04
Whitewater	19.7	20.57
State College Totals	154.1	221.1
University		
Madison	190.8	198.0
Milwaukee	47.1	46.32
University Total	237.9	244.32
All Institution Totals	392.0	465.4

1. How many feet of laboratory space do we have for each student enrolled this year?

The all-institution average of 12.6 assignable square feet of laboratory space per student enrolled at the University and the State Colleges represents a 2.4 foot drop from the 15 feet per student which were available in 1958. Both the State College and the University average have fallen, with especially large decreases noted at Whitewater and the Madison campus of the University; apparently at these institutions laboratory construction is progressing at a rate slower than the increasing enrollments. The State Colleges at Menomonie and Superior and the Milwaukee campus of the University show reasonably substantial increases in the amount of space per student enrolled; these three institutions have recently completed new laboratory buildings.

Comparison of these figures with those reported by Doi and Scott [1] indicate that Wisconsin institutions have less teaching laboratory space per student enrolled than 75% of the degree-granting institutions in that study. Doi-Scott report that about 25% of the institutions they studied have less than 11 feet per student enrolled, and 75% have more. About 90% of the institutions in the Doi-Scott study had more laboratory space per student enrolled than the five Wisconsin institutions which reported 9 feet or less. Colleges such as Stout and Platteville, whose programs involve a large amount of laboratory work show the greatest number of feet of laboratory space per student enrolled.

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[1] James I. Doi and Keith L. Scott. Normative Data on the Utilization of Instructional Space in Colleges and Universities. American Association of Collegiate Registrars and Admissions Officers. July, 1960.

2. How many feet are allowed for each student station in laboratories?

All institutions except Whitewater show some increase in the average number of square feet allowed for each student station in laboratories. The 45.1 square feet per student station at Wisconsin institutions is more than that of 75% of the degree-granting institutions in the Doi-Scott study have, but it is far below the 91.8 feet that the top 25% of those institutions had available.

Very likely the institutions with the largest number of feet per student station in the Doi-Scott study are those with graduate schools or with heavy laboratory programs, such as Stout, Platteville, and Madison. If this is the case, then the number of feet per student station in the three above-mentioned institutions is quite small by comparison with similar institutions, even though they do show more feet per station than the other colleges.

3. How many periods a week are laboratories used?

All institutions except Whitewater and Oshkosh State Colleges show a decrease in the number of periods used per week per room for laboratories, although the all-institutional average of 20.8 periods used each week per room is better than 90% of the degree-granting institutions studied by Doi and Scott.

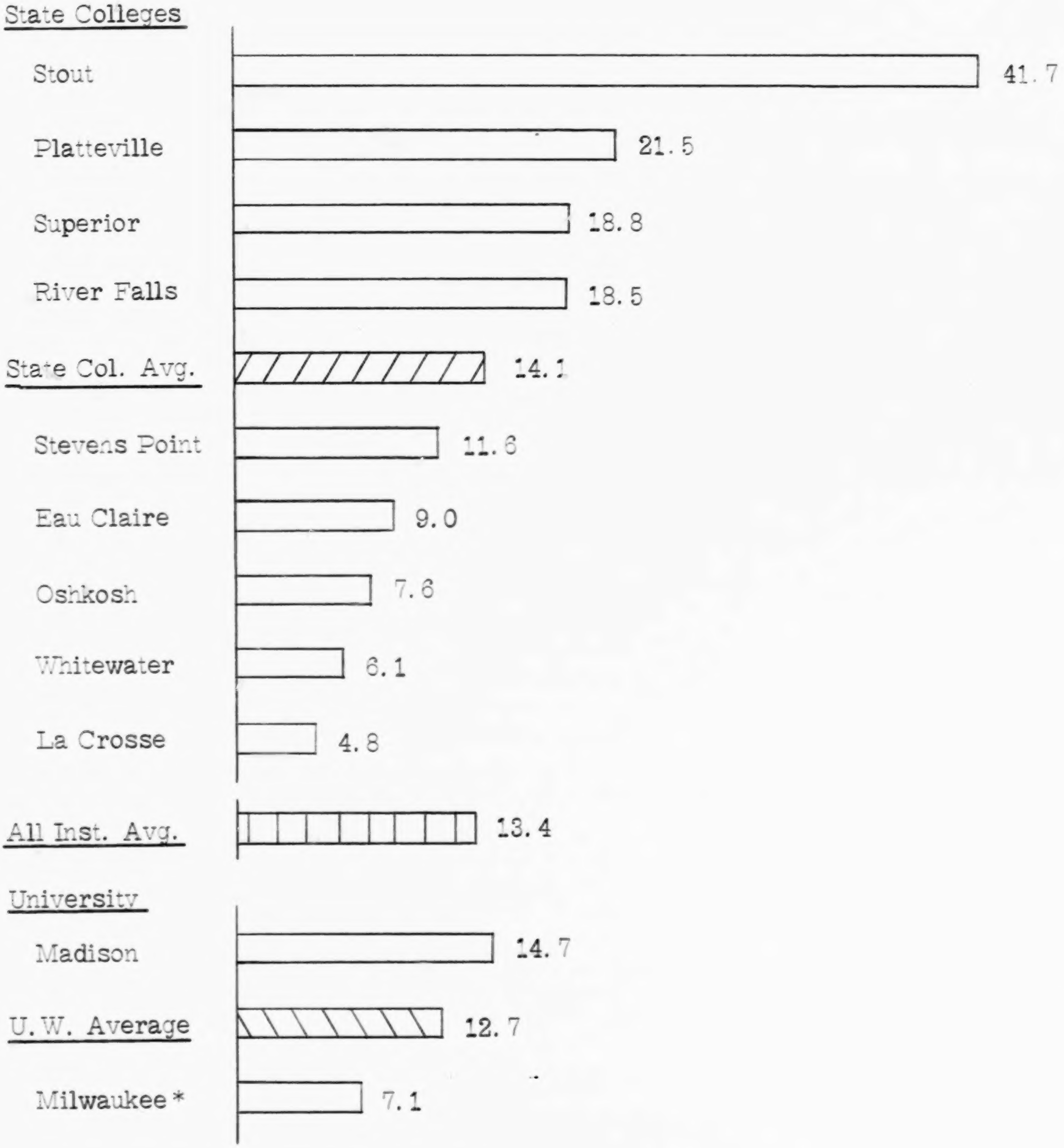
4. What proportion of the seats are filled when the laboratory is in use?

The percent of student stations filled when the laboratories are in use is increasing. One college, Stout, has reached the Coordinating Committee for Higher Education standard of 60% of student stations utilized, and most of the others are moving rapidly in that direction.

The all-institutional average of 66.6 per cent of student stations utilized during regularly scheduled hours is better than that of 60% of the degree-granting institutions studied by Doi and Scott. In this respect it ought to be noted that the unscheduled use of laboratories by graduate students, by faculty members, and by students using laboratories after hours to make up work, increases the number of actual hours that laboratories are being used in many of the colleges, though this unscheduled use is not reported for purposes of this study.

CHART 35

THE ASSIGNABLE SQUARE FEET OF LABORATORY SPACE PER STUDENT ENROLLED, FALL 1961



* Includes 735 full-time equivalent night students.

CHART 36

THE NUMBER OF ASSIGNABLE SQUARE FEET PER STUDENT STATION FOR LABORATORIES
Fall, 1961

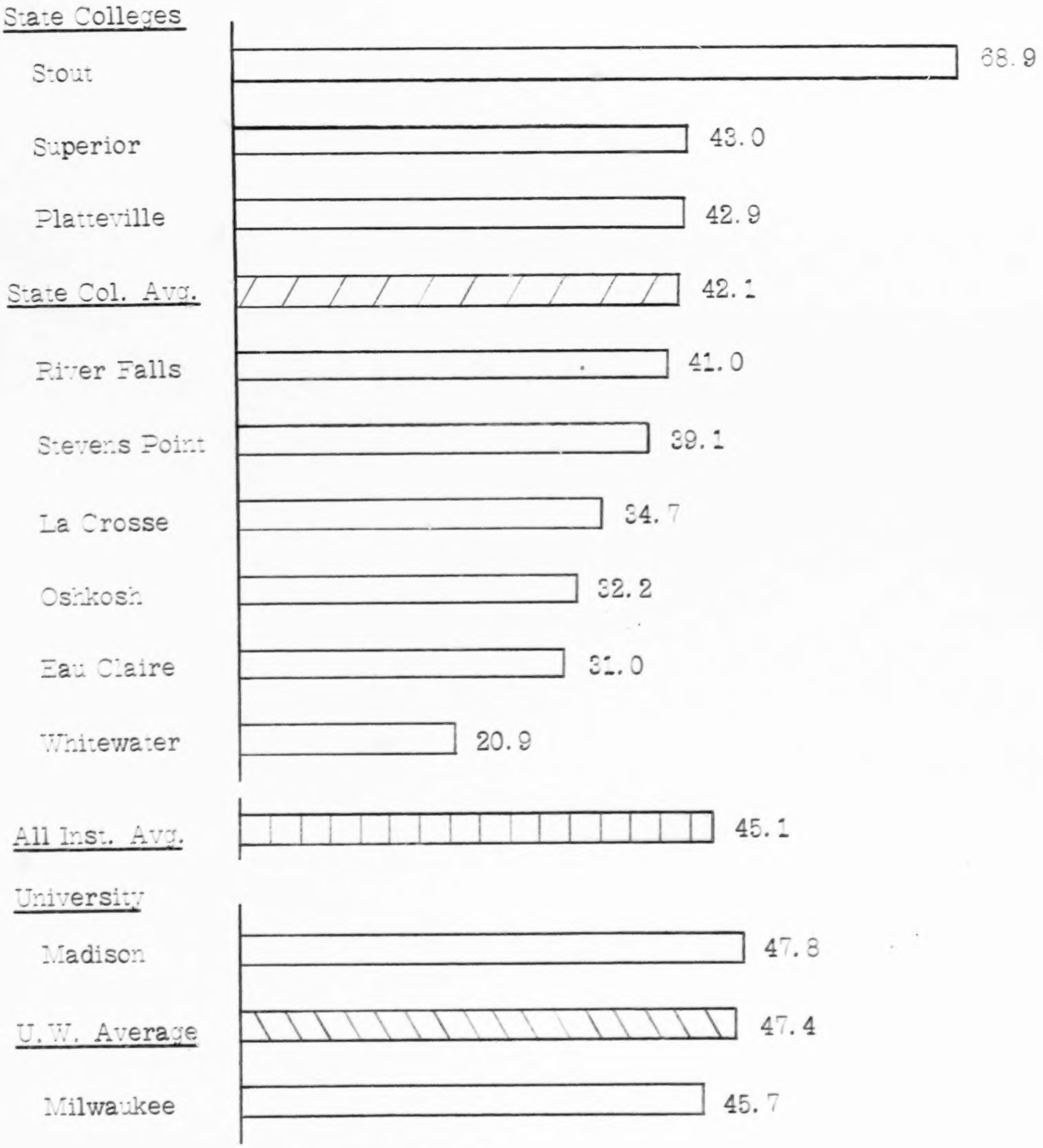


CHART 37

THE AVERAGE ROOM PERIODS USED PER WEEK PER ROOM FOR LABORATORIES
Fall, 1961

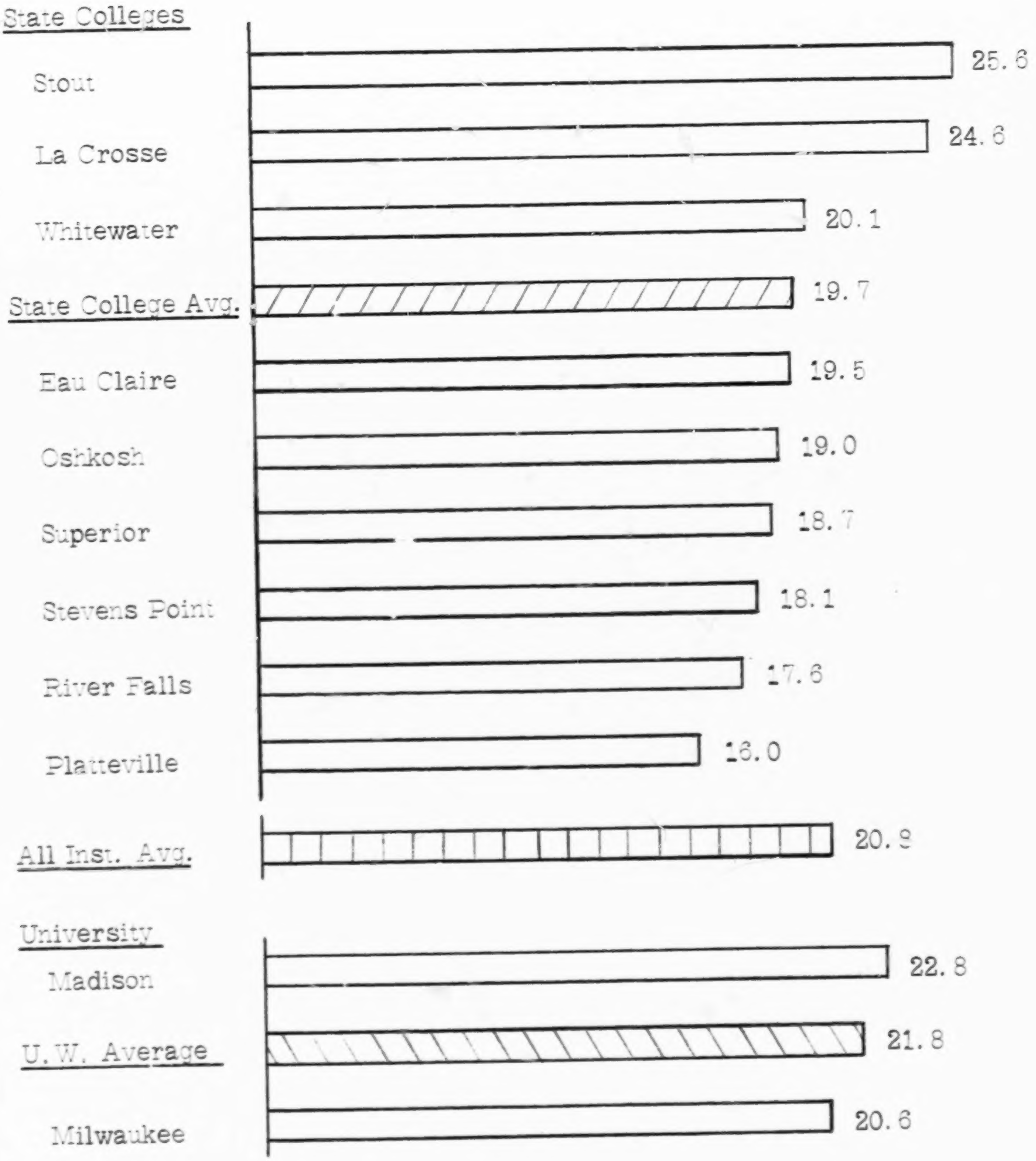
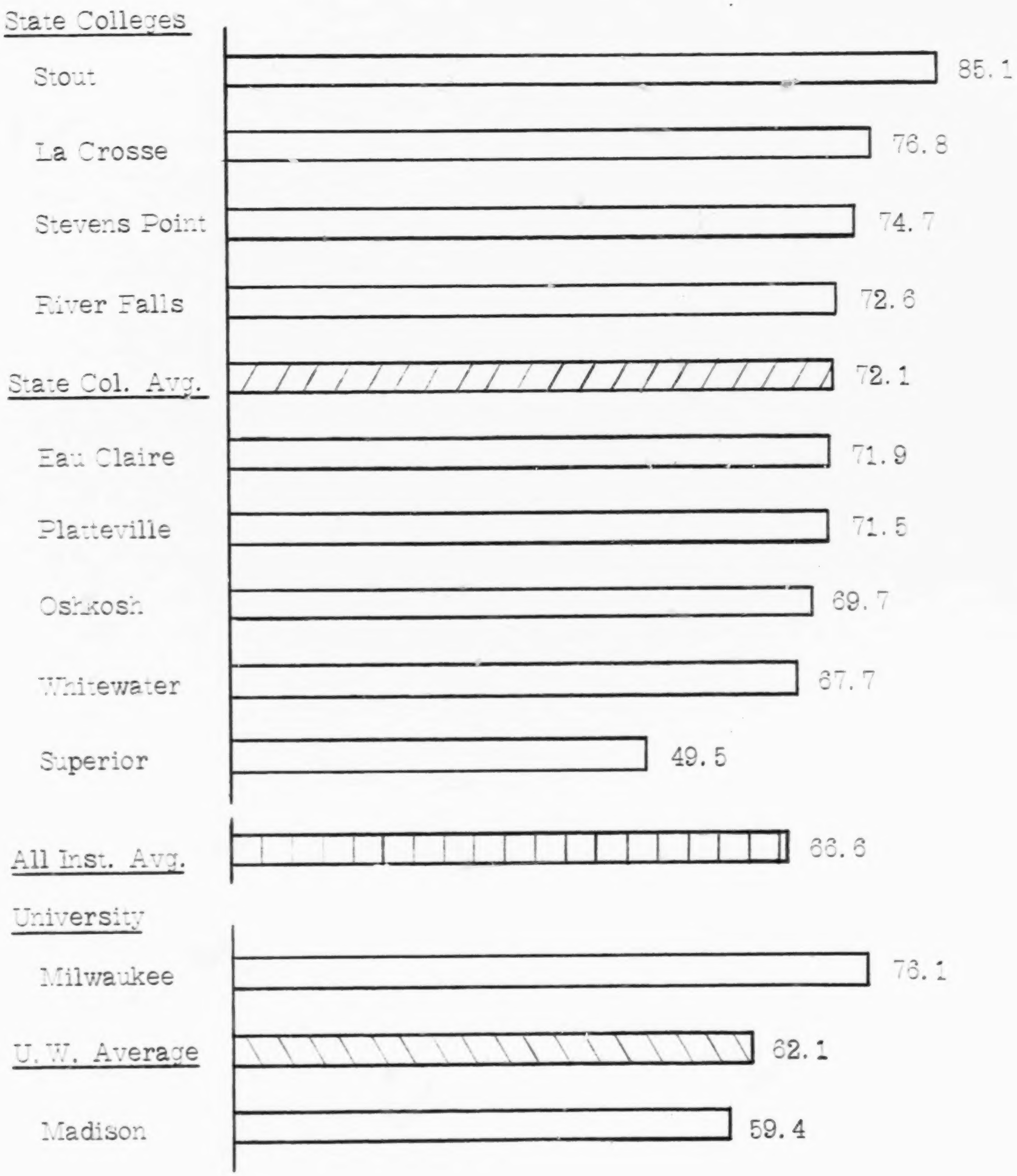


CHART 38

PERCENT OF STUDENT STATIONS UTILIZED FOR LABORATORIES DURING SCHEDULED PERIODS
Fall, 1961



5. Does any size of laboratory appear to be better utilized than another size?

Most laboratories at all institutions have fewer than 50 student stations. At the State Colleges and the Milwaukee campus of the University, the majority of laboratories fall in the 21-50 student station capacity size, while at Madison the majority of laboratories are in the 0-20 range. Undoubtedly, the special requirements of graudate programs call for a greater number of specialized laboratories which have fewer student stations in them. Only a small proportion of laboratories have as many as 51-100 student stations, and only four (1 at Whitewater and three in Madison) are as large as 101 stations.

The State Colleges and the Milwaukee campus use the 21-50 size laboratories more hours per week than any other size. Madison uses its 0-20 size laboratories more periods per week than its 21-50 size laboratories, but uses its three 101+ laboratories more periods per week than any of the others.

The per cent of student stations occupied during regularly scheduled periods is about the same for both 0-20 and 21-50 size laboratories. Oshkosh, Platteville, River Falls, Stout and Milwaukee have a greater percent of student station utilization than the standard recommended by the Coordinating Committee for Higher Education.

Laboratories with more than 50 student stations generally show a smaller per cent of the stations used. This is true in all cases save Stout, Whitewater and Milwaukee, where 51-100 size laboratories are used nearly at or above the standard.

On the whole it appears that laboratories with 21-50 student stations show a better utilization than other sizes from the point of view of the number of periods per week the room is used and the percent of student stations utilized when the rooms are in use.

C H A R T 39

PERCENT OF TEACHING LABORATORIES OF DIFFERENT SIZES AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

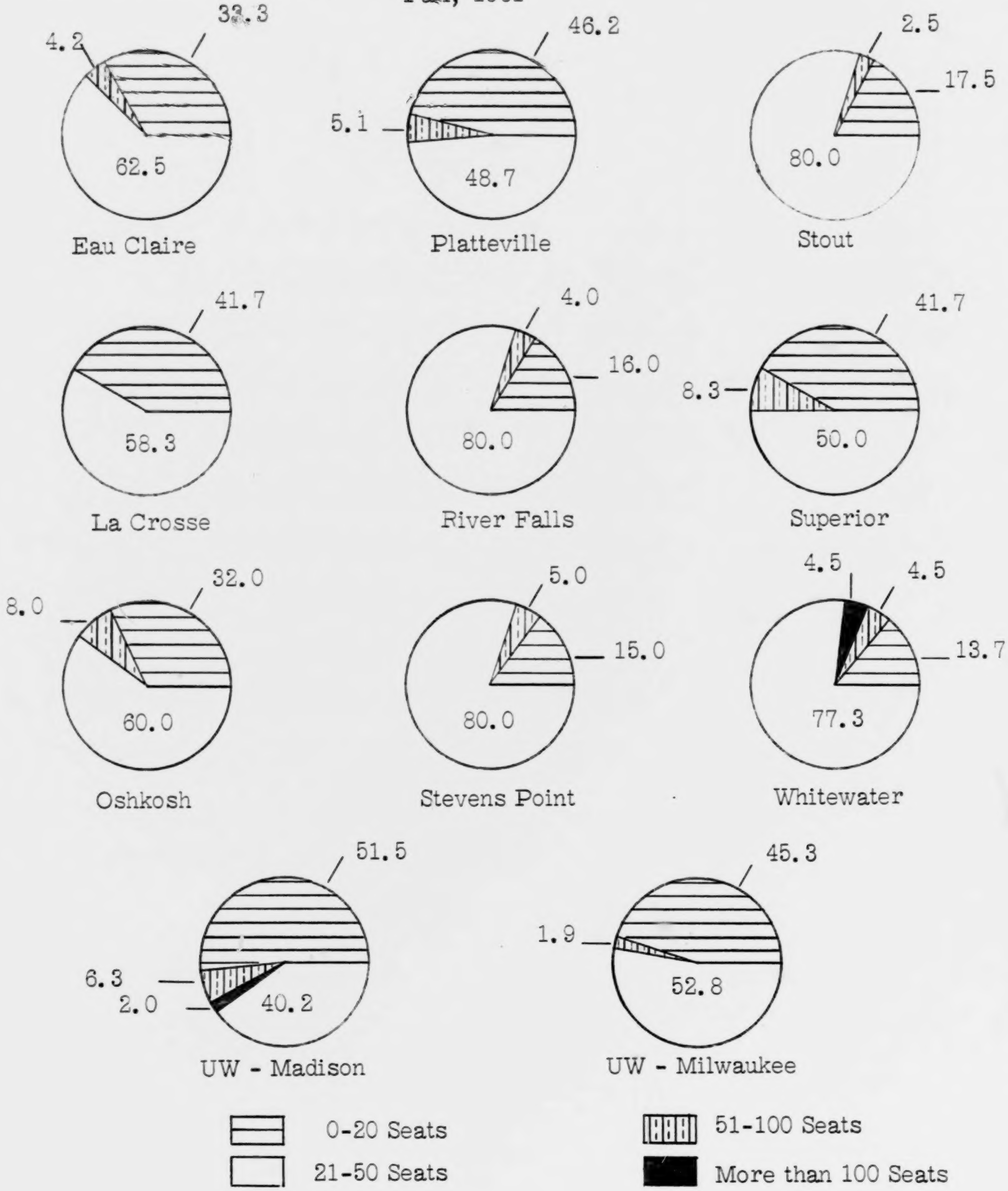


CHART 40

WEEKLY UTILIZATION OF LABORATORIES AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

STUDENT STATION CAPACITY 0-20

Institutions	Per Cent of Laboratories Capacity 0-20	Avg. Room Periods Used Per Week	Per Cent of Stu. Stations Occupied	Avg. Sq. Ft. Per Student Station
State Colleges				
Eau Claire	33.3	10.3	71.9	57.4
La Crosse	41.7	13.0	67.6	39.5
Oshkosh	32.0	6.9	95.8	43.8
Platteville	46.2	11.5	88.1	67.2
River Falls	16.0	6.8	88.7	10.6
Stevens Point	15.0	6.3	54.7	34.7
Stout	17.5	20.0	91.3	97.4
Superior	41.7	14.6	47.5	50.7
Whitewater	13.7	9.3	82.7	45.6
State College Avg.	28.6	11.7	77.0	63.3
University				
Madison	51.5	23.3	70.9	68.6
Milwaukee	45.3	17.5	89.6	71.8
University Average	50.3	22.3	74.5	69.2

CHART 41

WEEKLY UTILIZATION OF LABORATORIES AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

STUDENT STATION CAPACITY 21-50

State Colleges	Per Cent of Laboratories Capacity 21-50	Avg. Room Periods Used Per Week	Per Cent of Stu. Stations Occupied	Avg. Sq. Ft. Per Student Station
Eau Claire	62.5	23.7	77.9	31.4
La Crosse	58.3	32.1	77.9	33.1
Oshkosh	60.0	23.7	79.0	34.3
Platteville	48.7	19.3	71.9	34.0
River Falls	80.0	19.1	76.1	35.4
Stevens Point	80.0	20.8	79.4	42.2
Stout	80.0	27.4	84.6	65.7
Superior	50.0	21.8	52.3	47.2
Whitewater	77.3	20.8	77.7	23.3
State College Avg.	66.4	25.7	77.0	40.6
University				
Madison	40.2	21.5	72.1	49.4
Milwaukee	52.8	21.4	70.8	33.0
U.W. Average	42.4	21.5	71.8	45.7

C H A R T 42

WEEKLY UTILIZATION OF LABORATORIES
AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

STUDENT STATION CAPACITY 51-100

Institutions	Per Cent of Laboratories Capacity 51-100	Avg. Room Periods Used Per Week	Per Cent of Stu. Stations Occupied	Avg. Sq. Ft. Per Student Station
State Colleges				
Eau Claire	4.2	23.0	46.0	13.5
La Crosse				
Oshkosh	8.0	32.5	40.2	13.3
Platteville	5.1	25.8	52.1	34.5
River Falls	4.0	34.0	52.6	45.8
Stevens Point	5.0	13.0	30.1	21.3
Stout	2.5	6.0	84.7	36.5
Superior	8.3	24.5	42.4	20.9
Whitewater	4.5	20.0	82.5	15.6
State College Avg.	4.7	23.7	48.3	23.7
University				
Madison	6.3	23.7	55.6	28.4
Milwaukee	1.9	34.0	91.7	20.9
U.W. Average	5.3	24.3	59.4	35.9

CHART 43

WEEKLY UTILIZATION OF LABORATORIES AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

STUDENT STATION CAPACITY 101+

Institutions	Per Cent of Laboratories Capacity 101+	Avg. Room Periods Used Per Week	Per Cent of Stu. Stations Occupied	Avg. Sq. Ft. Per Student Station
State Colleges				
Eau Claire				
La Crosse				
Oshkosh				
Platteville				
River Falls				
Stevens Point				
Stout				
Superior				
Whitewater	4.5	25.0	27.4	6.1
State College Avg.	.3	25.0	27.4	6.1
University				
Madison	2.0	31.5	26.2	14.4
Milwaukee				
U.W. Average	2.0	31.5	26.2	14.4

6. What per cent of the laboratories are in use at any given hour of the day?

As with classrooms, the ideal use of laboratories would be achieved when a high proportion of the rooms are in use for many hours a day. This ideal is much more difficult to achieve with laboratories, than with classrooms.

In most of the institutions, slightly fewer laboratories were used each hour of the day than were reported in the 1958 study. This reflects the fact that laboratories are used a few hours less per week now than they were in 1958. La Crosse, Whitewater, Oshkosh and Madison have increased the number of students handled each week in their laboratories either by making better use of evening and Saturday hours, or by leveling out the scheduling of laboratories during the week. Laboratories show a tendency to "fade-out" of use during noon hours, and in some institutions there is a weekly scheduling sequence which causes laboratories to be used more heavily some days than others.

CHART 44

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT EAU CLAIRE STATE COLLEGE

Fall, 1961

22 Laboratories

Period	M	T	W	TH	F	S
1	45	55	50	55	27	0
2	50	68	55	68	27	05
3	45	64	41	68	05	05
4	50	55	50	59	14	05
5	14	27	14	27	09	0
6	55	41	55	45	14	0
7	73	59	73	59	23	0
8	68	50	73	50	23	0
9	23	27	27	27	0	0
10	0	23	0	23	0	0
11	0	09	0	0	0	0
12	0	05	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 45

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT LA CROSSE STATE COLLEGE

Fall, 1961

11 Laboratories

Period	M	T	W	TH	F	S
1	36	54	27	63	45	0
2	36	54	27	63	45	0
3	63	63	45	63	27	0
4	54	72	45	72	27	0
5	18	54	18	45	0	0
6	36	54	27	45	18	0
7	72	81	63	81	36	0
8	54	81	54	81	27	0
9	45	45	45	45	36	0
10	45	45	45	45	09	0
11	0	36	0	36	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 46

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT OSHKOSH STATE COLLEGE

Fall, 1961

24 Laboratories

Period	M	T	W	TH	F	S
1	49	21	62	16	21	16
2	49	57	57	57	25	16
3	21	49	29	53	29	16
4	21	49	29	49	29	0
5	12	53	25	53	25	0
6	04	25	16	29	16	0
7	12	45	70	49	53	0
8	16	49	57	45	45	0
9	33	57	37	57	21	0
10	21	53	25	53	08	0
11	04	0	04	04	04	0
12	04	04	04	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

C H A R T 47

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT PLATTEVILLE STATE COLLEGE

Fall, 1961

35 Laboratories

Period	M	T	W	TH	F	S
1	06	06	06	03	06	0
2	31	46	26	48	17	06
3	31	48	29	48	20	06
4	30	53	34	51	20	06
5	29	46	31	46	20	06
6	17	23	24	29	09	06
7	27	41	30	40	09	0
8	43	58	40	50	09	0
9	34	54	37	51	06	0
10	04	34	16	36	03	0
11	01	07	03	07	01	0
12	0	03	0	03	0	0
13	0	01	0	04	0	0
14	0	0	0	03	0	0

CHART 48

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT RIVER FALLS STATE COLLEGE

Fall, 1961

21 Laboratories

Period	M	T	W	TH	F	S
1	43	43	48	48	43	0
2	38	43	43	52	43	0
3	38	38	45	57	38	0
4	57	38	52	52	52	0
5	19	24	14	29	10	0
6	29	10	14	29	19	0
7	36	52	05	57	19	0
8	48	36	52	36	24	0
9	43	57	38	48	19	0
10	05	52	10	43	0	0
11	05	05	05	05	0	0
12	10	0	0	0	0	0
13	0	10	0	10	0	0
14	0	10	0	10	0	0

CHART 49

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT STEVENS POINT STATE COLLEGE

Fall, 1961

18 Laboratories

Period	M	T	W	TH	F	S
1	22	39	33	33	33	0
2	17	33	11	39	22	0
3	56	67	50	67	61	0
4	50	61	39	67	33	0
5	28	17	33	17	11	0
6	22	17	28	22	17	0
7	39	56	50	56	56	0
8	56	28	50	33	44	0
9	50	39	39	33	33	0
10	28	11	33	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 50

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT STOUT STATE COLLEGE

Fall, 1961

36 Laboratories

Period	M	T	W	TH	F	S
1	53	53	58	53	50	0
2	58	55	64	55	58	0
3	47	66	36	69	58	0
4	47	64	44	66	50	0
5	30	28	30	25	30	0
6	64	47	64	50	53	0
7	61	64	66	64	53	0
8	50	61	55	64	53	0
9	39	47	44	47	33	0
10	30	28	33	25	28	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

CHART 51

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT SUPERIOR STATE COLLEGE

Fall, 1961

20 Laboratories

Period	M	T	W	TH	F	S
1	35	5	35	5	35	0
2	45	5	45	55	4	05
3	5	4	45	6	1	05
4	4	3	3	3	4	05
5	25	2	25	2	1	0
6	45	3	4	35	35	0
7	65	45	5	55	35	0
8	35	45	4	5	2	0
9	25	35	35	3	0	0
10	1	0	0	05	0	0
11	1	0	05	0	0	0
12	05	0	0	0	0	0
13	05	0	0	0	0	0
14	0	0	0	0	0	0

CHART 52

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT WHITEWATER STATE COLLEGE

Fall, 1961

20 Laboratories

Period	M	T	W	TH	F	S
1	55	55	55	55	45	10
2	55	60	55	60	50	10
3	25	35	35	35	35	10
4	40	45	60	45	60	0
5	15	15	30	15	30	0
6	50	60	50	60	40	0
7	25	60	25	60	25	0
8	40	50	40	50	35	0
9	20	40	10	40	10	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0

C H A R T 53

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT UW MADISON

Fall, 1961

168 Laboratories

Period	M	T	W	TH	F	S
1	32	40	39	40	30	7
2	38	49	41	50	36	13
3	37	43	39	46	33	14
4	39	39	39	43	34	9
5	3	5	4	5	2	1
6	51	51	48	51	38	1
7	56	65	64	59	44	1
8	49	56	50	52	37	1
9	38	37	38	34	24	1
10	1	1	1	1	0	1
11	8	7	8	6	1	0
12	7	6	7	5	0	0
13	7	5	7	4	0	0
14	0	0	0	0	0	0

CHART 54

PERCENT OF ROOM PERIOD USE OF 100% LABORATORIES AT UW MILWAUKEE

Fall, 1961

45 Laboratories

Period	M	T	W	TH	F	S
1	11	16	11	16	13	7
2	53	42	51	44	38	9
3	47	49	49	56	33	9
4	47	46	47	46	33	1
5	38	37	40	37	27	0
6	58	42	58	49	49	0
7	73	53	71	58	49	0
8	56	43	56	43	36	0
9	36	22	38	20	20	0
10	2	9	2	9	0	0
11	6	3	8	1	0	0
12	11	11	16	7	0	0
13	11	13	17	7	0	0
14	1	11	11	7	0	0

7. What have the institutions done over the past six years to increase utilization?

The following charts pull together several factors related to utilization of teaching laboratories in such a way that it is possible to see the interrelationships among them.

First it must be noted that all institutions except Whitewater, La Crosse, and Milwaukee show more laboratories in 1961 than they did in 1958. It has been observed in relation to classrooms that if the number of available rooms is increased at a rate greater than the increase in enrollments, utilization will generally appear poorer for some period of time after the new rooms are constructed. The present laboratory facilities at many of those institutions which have recently added laboratory rooms will have to accommodate the increase in enrollments until the new facilities being planned are constructed.

To interpret the following charts: There appears to be a trend toward increasing the number of square feet per student station in laboratories. With an increase in the number of feet per student station, the number of student stations per room is decreased, as would be expected assuming the size of teaching laboratories remains fairly constant. The increasingly complex nature of the equipment required in science laboratories apparently makes it necessary to increase the amount of space per student.

Most of the institutions have increased the per cent of student stations occupied when the laboratories are in use along with increasing the number of student stations available. Oshkosh shows a decrease in per cent of student stations occupied, but it has increased the number of periods a room is in use each week. Superior, which has a new science laboratory, shows a decrease in per cent of student stations occupied and a decrease in number of periods a week a room is in use, which is to be expected inasmuch as this new facility will undoubtedly have to be large enough to handle enrollment increases for some time to come. It ought to be noted that Superior teaches over 2,000 more students per week in its laboratories than it did in 1958.

Milwaukee has had the same kind of experience as had Superior. With a new building constructed to handle enrollments for many years to come, Milwaukee this year shows a decrease in the per cent of student stations utilized and in the average number of periods per week laboratories are used. This decrease is at least in part due to the effect of the smaller night-time use of laboratories.

Except in Oshkosh and Whitewater, the average number of periods a room is used each week has decreased from what it was in 1958, though the per cent of student stations utilized when the room is in use has gone up during the same period. In effect what has happened is that more rooms are available to handle the enrollments, thus more student stations are available, and percentage of the student stations in use has increased, though the room period use has lessened somewhat. Out of this complex of interrelationships, most of the institutions are handling more students per week in their laboratories... the state college system handles 20,447 more students per week in laboratories than it did in 1958, and the University of Wisconsin-Madison handles 3,655 more students per week in laboratories than it did in 1958.

Four institutions are handling a greater number of students per week per room now than they did in 1958, La Crosse, Oshkosh, Whitewater, and Madison. Oshkosh and Whitewater apparently achieved this increase by increasing the number of periods used per week per room and, in the case of Oshkosh, by increasing the per cent of student stations occupied. Madison and La Crosse increased the per cent of student stations occupied sufficiently so that they handle more students per week per room. All other institutions show a smaller number of students per week per room than they did in 1958, however, all except Milwaukee have more students per week in laboratories now than they did in 1958.

It will be recalled that the number of square feet of laboratory space per student enrolled has gone down since 1958. The institutions are handling more students per week in their laboratories now than they did in 1958, but they have been able to do this while using laboratories fewer hours per week. These facts, taken together, seem to indicate the possibility that fewer students are taking the kinds of courses that require laboratories. To test this possibility further, the number of student stations occupied in laboratories per week per student enrolled was computed for 1956, 1958 and 1961. This, in effect, gives the number of hours spent by a student or by the average student each week in some kind of laboratory. In the State College system and at the University of Wisconsin-Madison, there seems to be a slow but steady trend toward a student's spending fewer hours per week in a laboratory. At the University of Wisconsin-Milwaukee the trend appears to be accelerated, again by virtue of the lesser fact that the evening students apparently use the laboratories substantially fewer hours per student than do day students. Certainly these six years may not be indicative of a trend, and in some colleges there is a fluctuation rather than a trend, however, it is impressive that the over-all direction of the number of hours a student spends in laboratory courses seems to be going down, even in institutions which have programs of study which involve much laboratory work, Stout, River Falls, Platteville, and Madison.

If, however, fewer students are taking the programs that require laboratory work, and if this means that fewer students are taking science courses, it is certainly a matter for concern.

C H A R T 55

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT EAU CLAIRE STATE COLLEGE

Fall 1956, 1958, and 1961

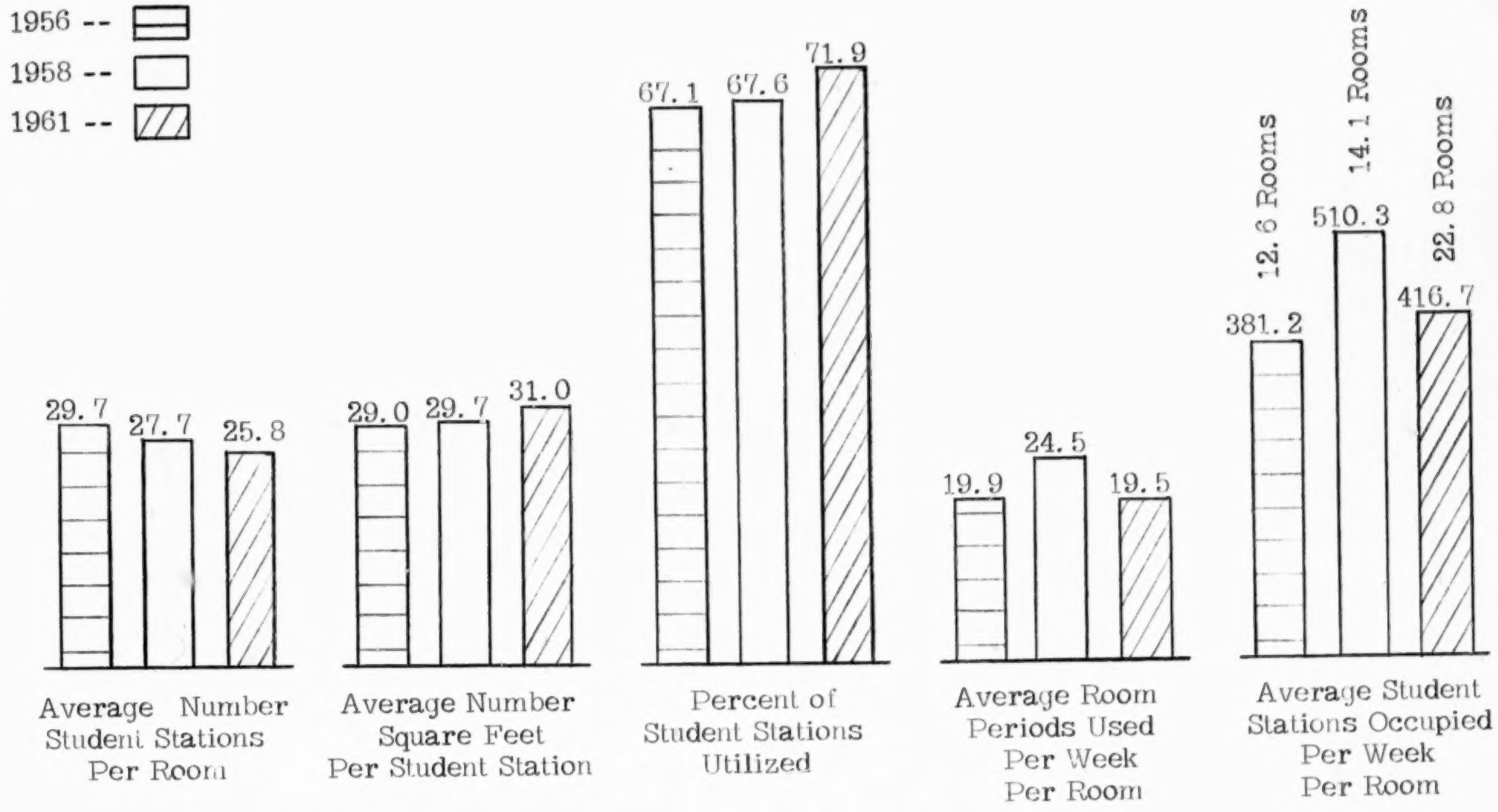


CHART 56

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT LA CROSSE STATE COLLEGE

Fall 1956, 1958, and 1961

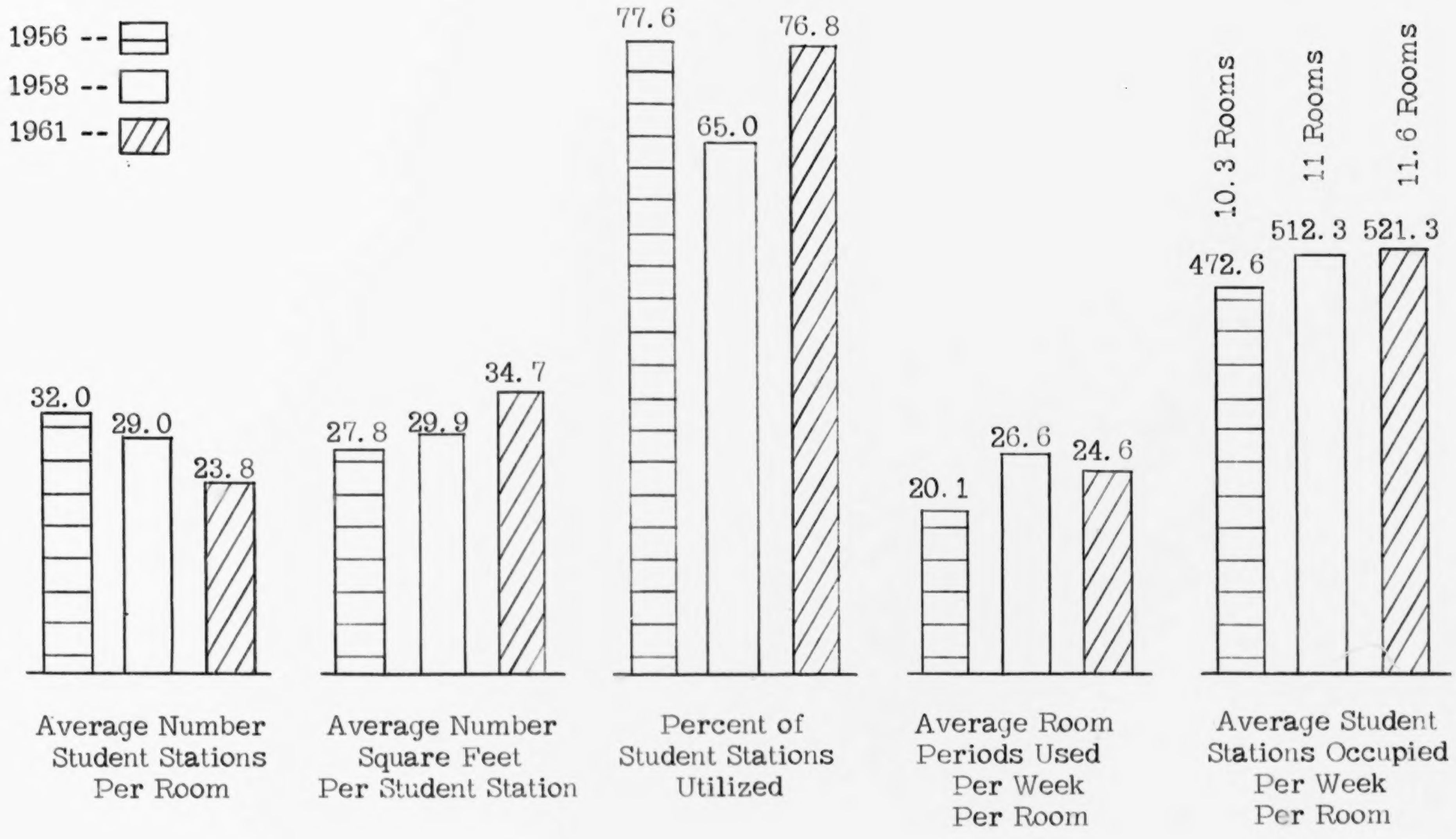


CHART 57

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT OSHKOSH STATE COLLEGE

Fall 1956, 1958, and 1961

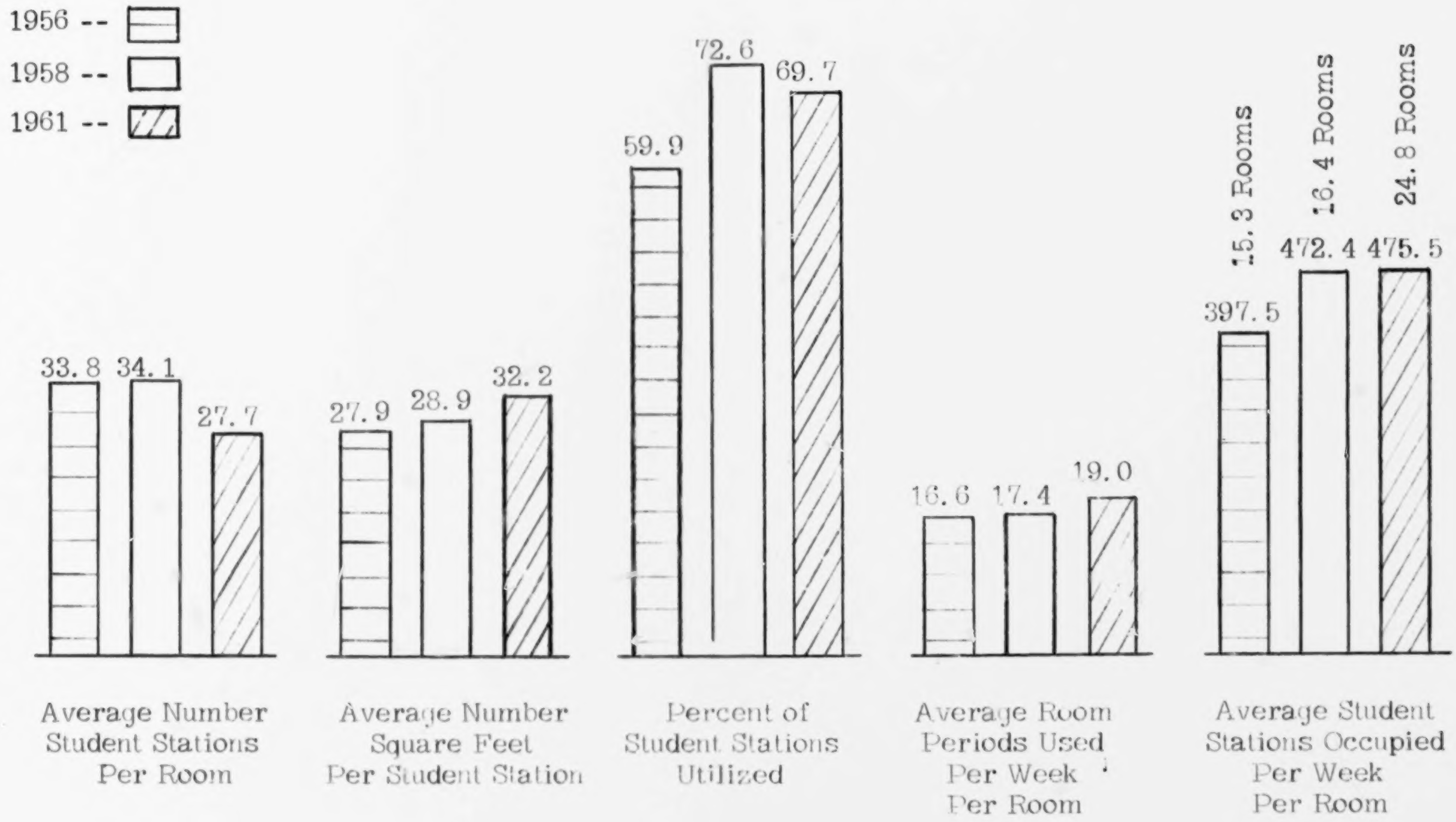


CHART 58

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT PLATTEVILLE STATE COLLEGE

Fall 1956, 1958, and 1961

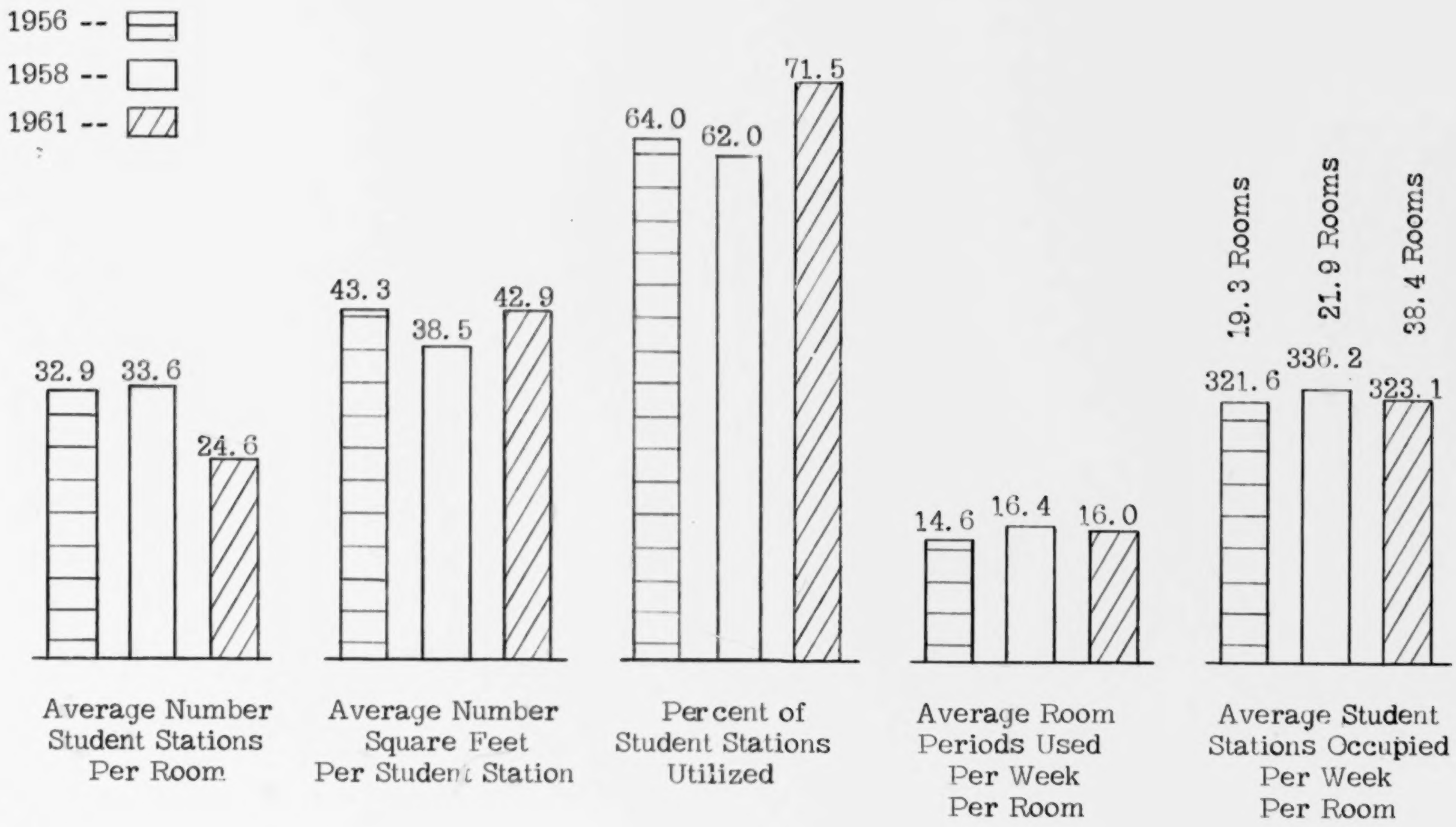


CHART 59

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT RIVER FALLS STATE COLLEGE

Fall 1956, 1958, and 1961

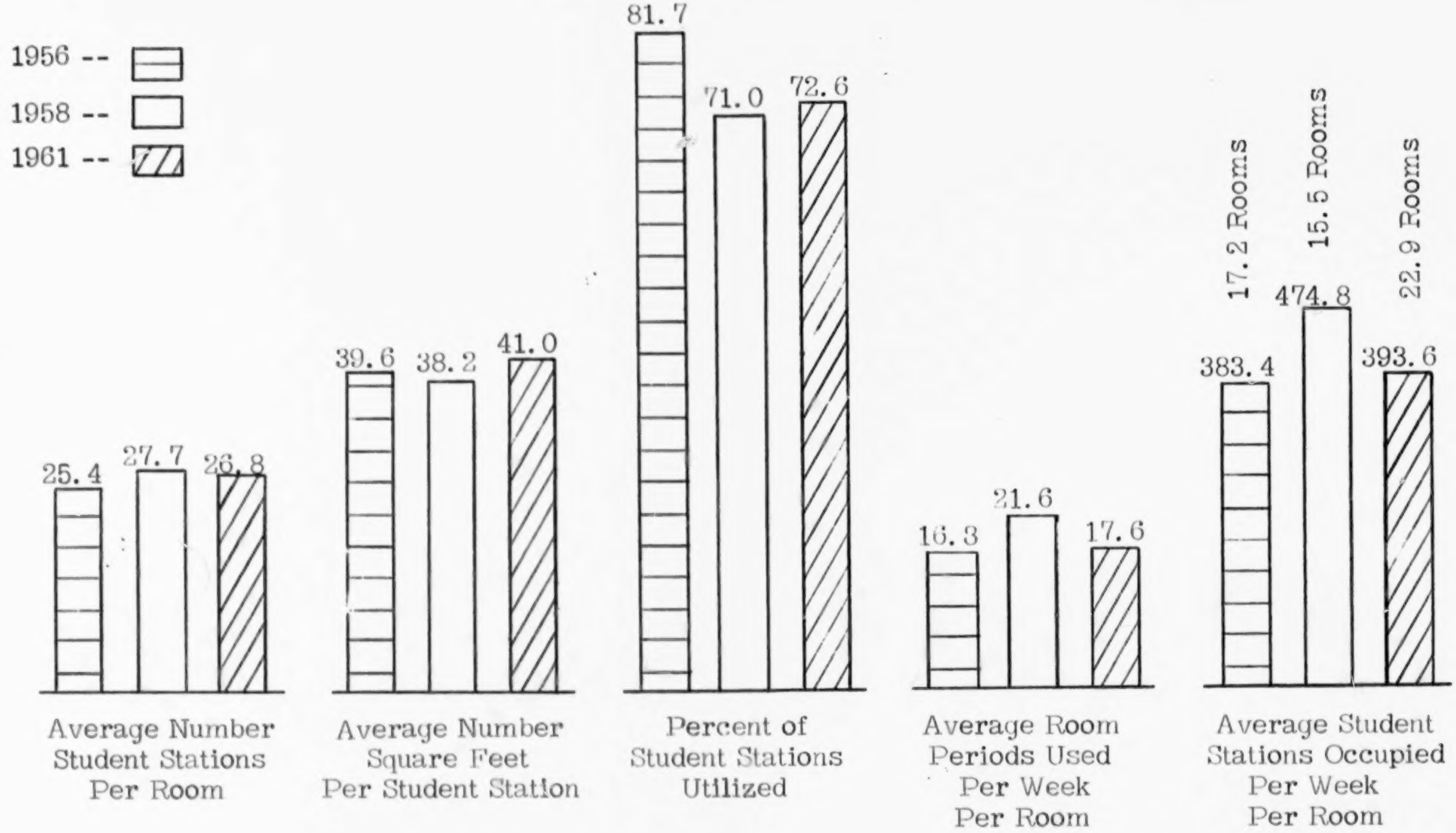
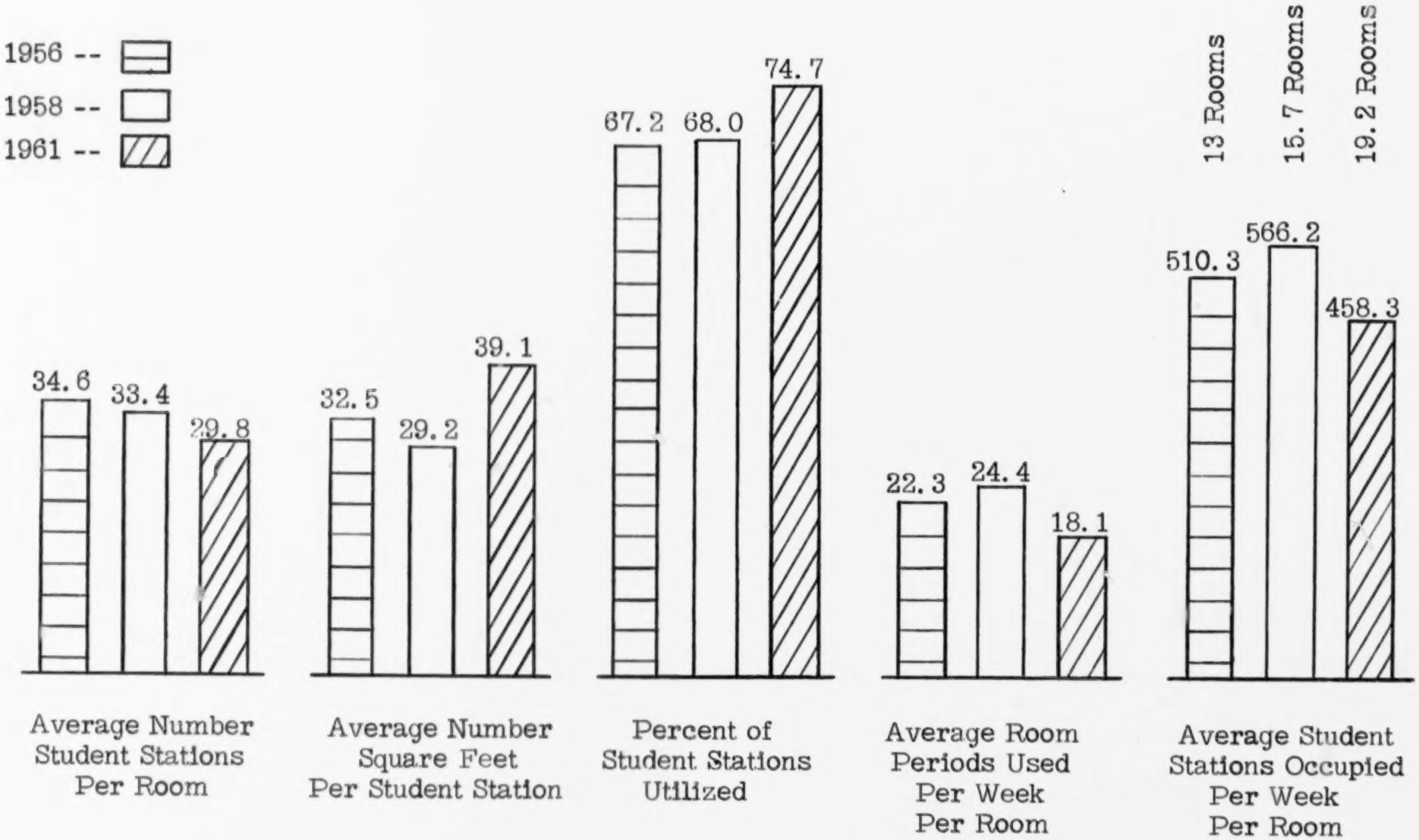


CHART 60

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT STEVENS POINT STATE COLLEGE

Fall 1956, 1958, and 1961



C H A R T 61

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT STOUT STATE COLLEGE

Fall 1956, 1958, and 1961

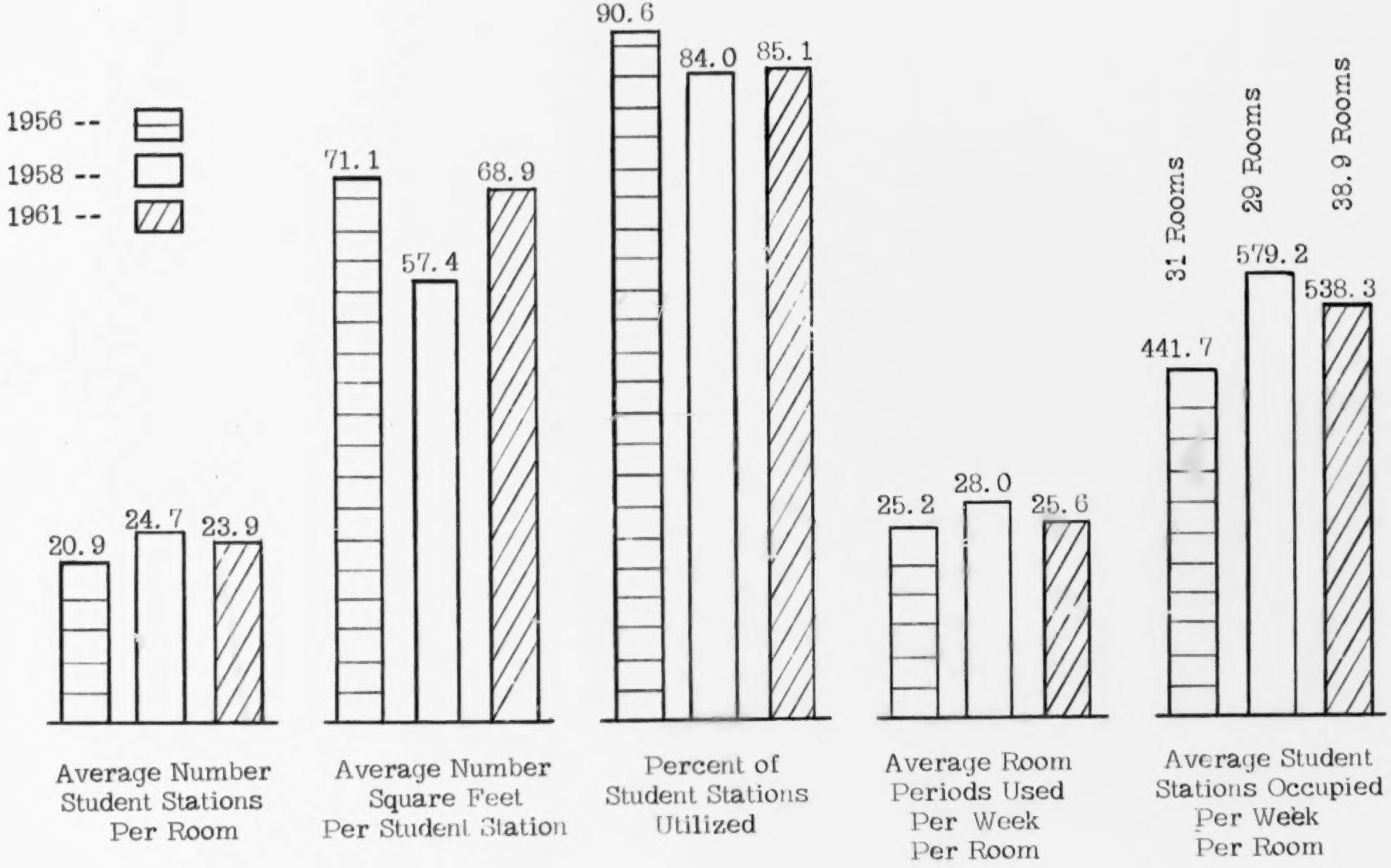


CHART 62

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT SUPERIOR STATE COLLEGE

Fall 1956, 1958, and 1961

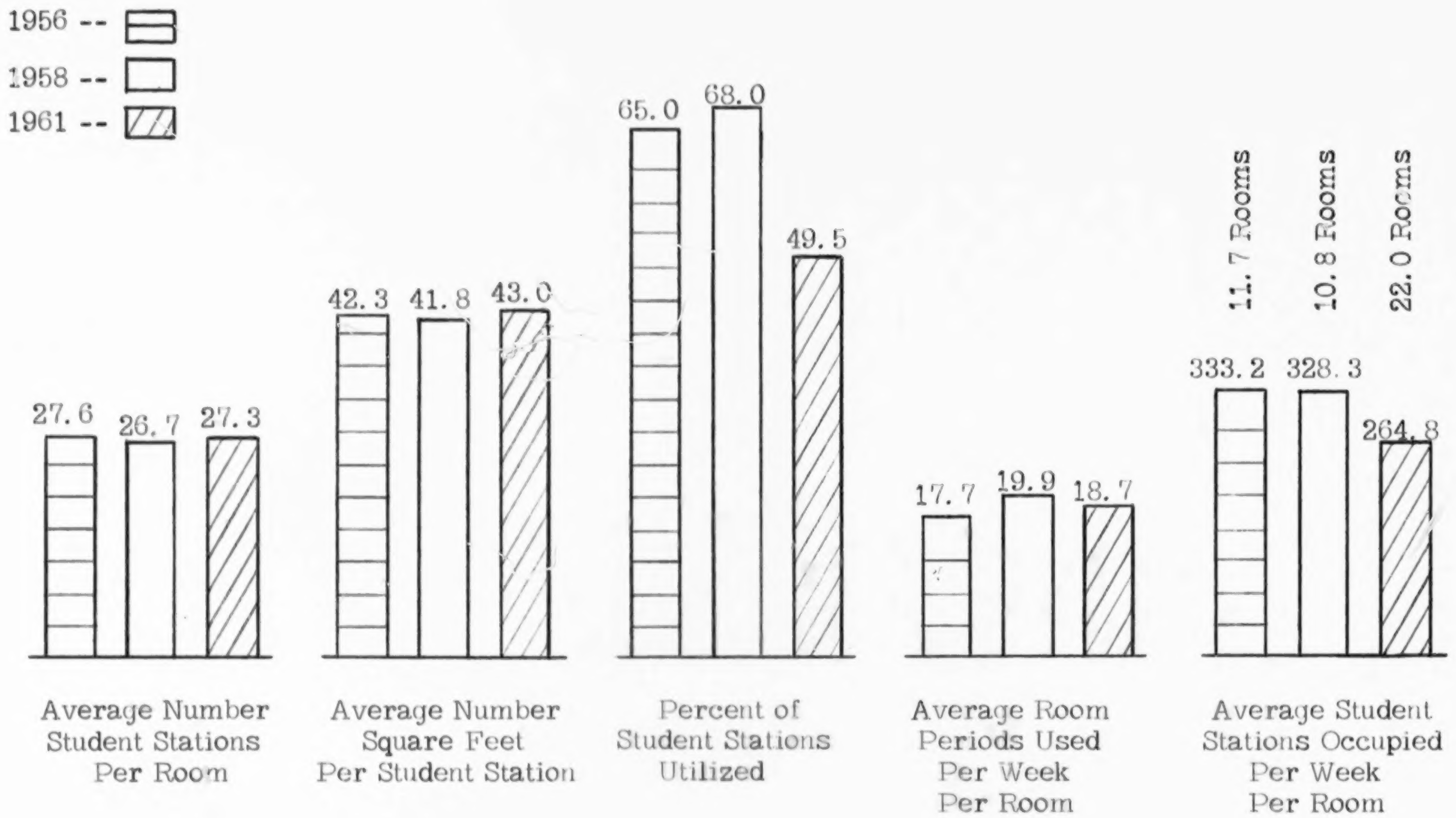
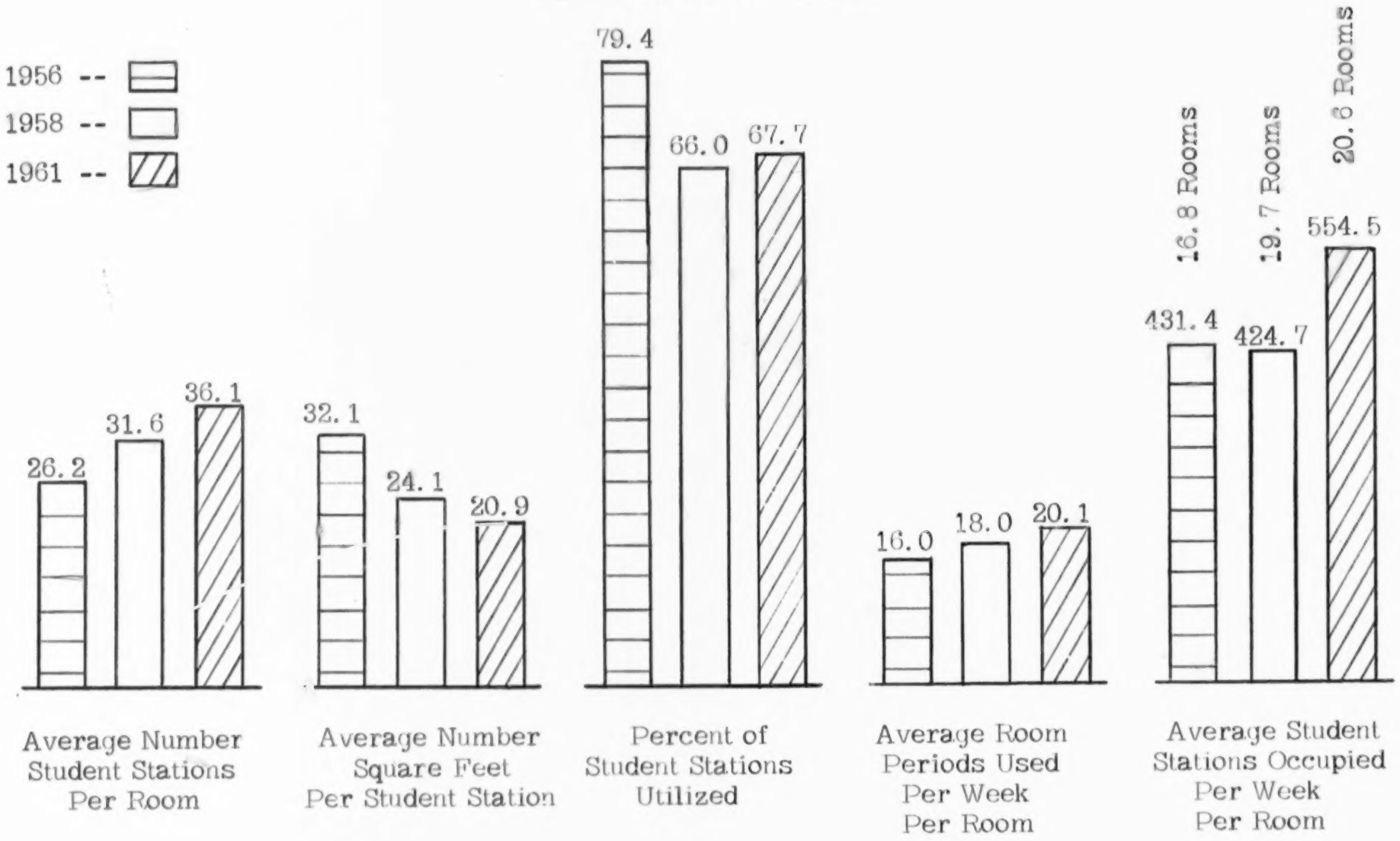


CHART 63

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT WHITEWATER STATE COLLEGE

Fall 1956, 1958, and 1961



C H A R T 64

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT UNIVERSITY OF WISCONSIN, MADISON

Fall 1956, 1958, and 1961

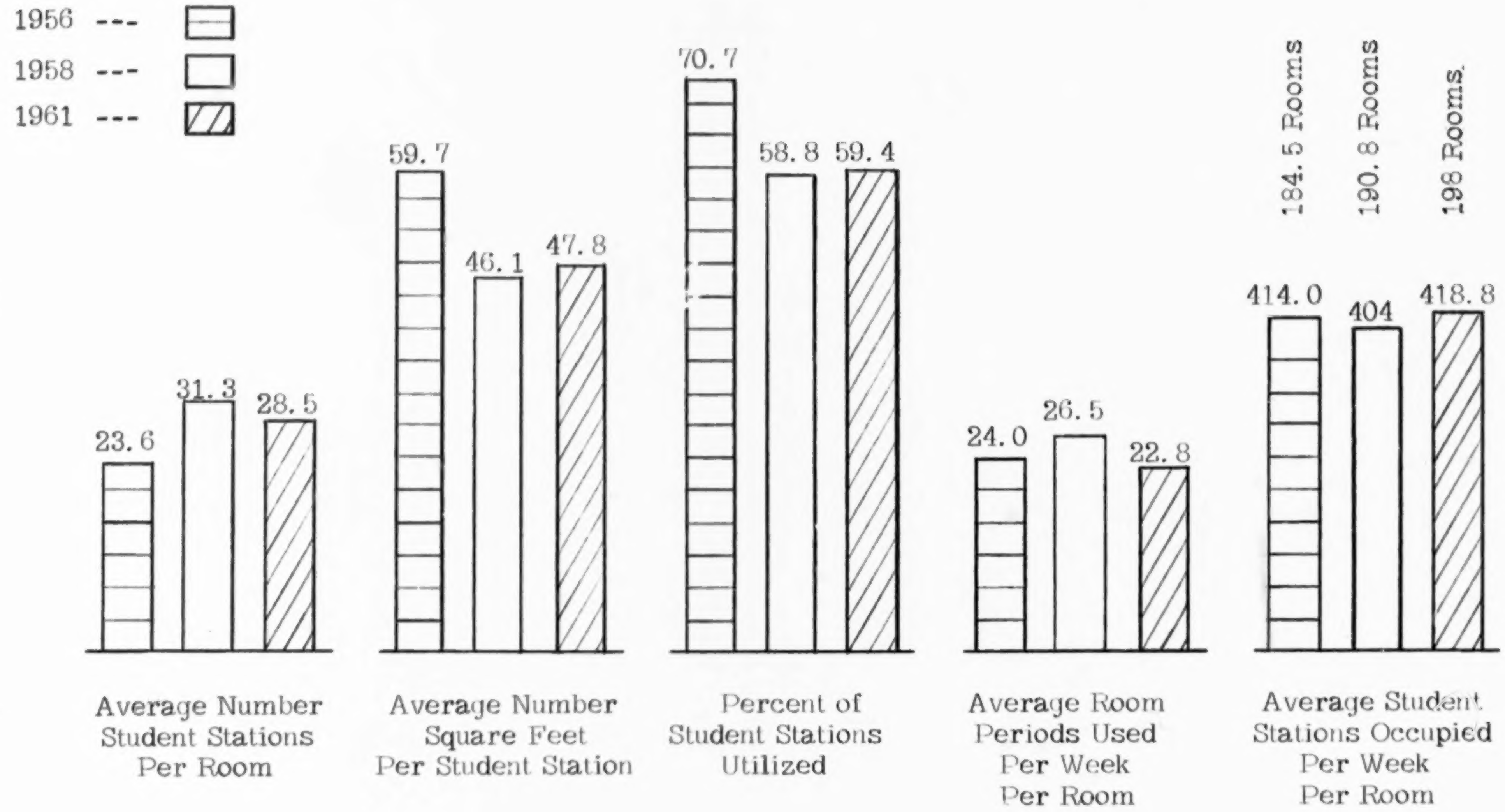
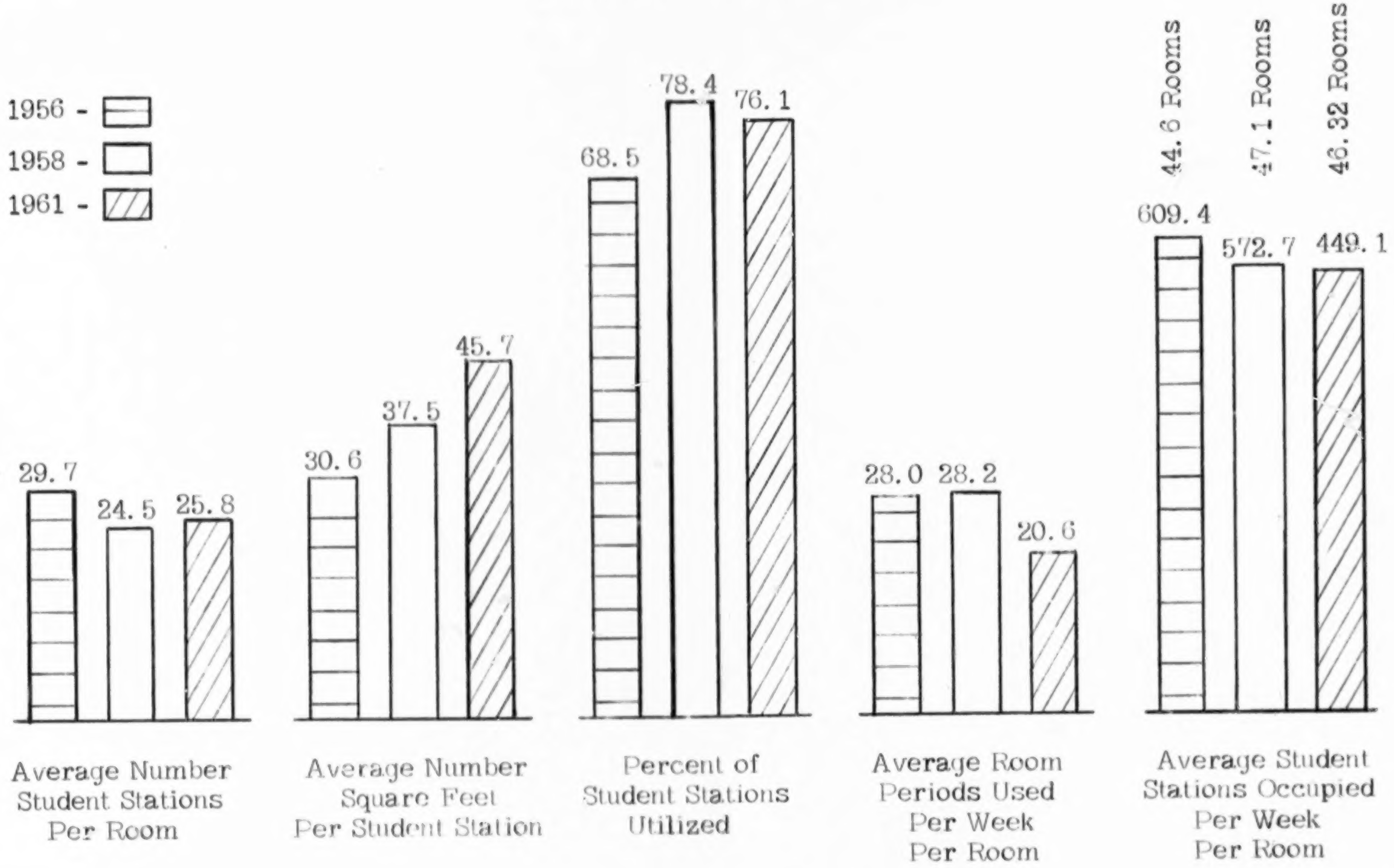


CHART 65

A COMPARISON OF ASSOCIATED FACTORS CONCERNING UTILIZATION OF REGULARLY SCHEDULED LABORATORIES

AT UNIVERSITY OF WISCONSIN, MILWAUKEE

Fall 1956, 1958, and 1961



8. Approximately how many more students than are presently enrolled, can the present laboratory facilities accommodate?

In order to determine the capacity of the present laboratory facilities, two kinds of data were required: the actual number of student stations available in laboratories, and the actual number of hours spent by each student in a laboratory or laboratories during the week. In addition, it was necessary to take into account the Coordinating Committee for Higher Education standards for utilization of laboratories, 24 hours per week per room with 80 per cent of the student stations occupied.

The computation formula used to determine capacities was: The number of student stations multiplied by 24 (the number of hours each student station ought to be occupied) and then multiplied by .8 (the per cent of student station utilization). This number was then divided by the average number of hours each student enrolled spends in a laboratory during the week. The number of hours in laboratories differs for each institution and is dependent upon the nature of the programs offered at each institution. Chart 66 presents this data for all institutions.

Applying the formula (Student Stations X 24 X .8 divided by Hours in laboratories)results in a number which is an approximation of the number of students which can be handled in each institution with its present laboratory facilities. Note: this implied that the quality of present facilities is good... an implication that is not true for all institutions.

The Joint Staff has made an estimate as to the year in which each institution might be expected to reach the capacity of its laboratories. Chart 66 includes this item, "The Year Before Institution Reaches Capacity". Considering the time it takes to construct new facilities, these laboratories will very likely be four years in planning and construction. Laboratories approved in 1962 will quite likely not be occupied before 1965.

It will be noted that all institutions except Superior will have reached the present capacity of their laboratory facilities by 1965. Superior has recently occupied a new science building. La Crosse, Oshkosh, Stevens Point, Stout, and Whitewater are presently very near or at capacity. Science facilities are presently funded or under construction at Oshkosh, Stevens Point and Whitewater, and Madison.

It should be understood that for purposes of calculating capacities, all kinds of laboratories have been lumped together. Quite possibly any given institution may feel a need for one kind of laboratory, i.e., a shop laboratory, rather than another, i.e., a chemistry laboratory. The Joint Staff is not in a position to make statements about the kinds of laboratory facilities needed at each institution. It should also be understood that teaching laboratories are only one of several kinds of instructional space at an institution of higher education, and that it is possible to be lacking in one kind of instructional space and not in others.

CHART 66

AN ESTIMATE OF THE POTENTIAL NUMBER OF STUDENTS THAT CAN BE ACCOMMODATED BY PRESENT TEACHING LABORATORIES UNDER THE RECOMMENDED STANDARDS

Institution	Number of Stu. Stations	Hrs. Spent By Ea. Student in Labs.	Estimated Capacity	Estimated Year Before Capacity Is Reached
Eau Claire	618	4.46	2,660	1963
La Crosse	285	3.25	1,684	1961
Oshkosh	693	4.35	3,059	1961
Platteville	961	6.75	2,734	1964
River Falls	669	6.39	2,010	1963
Stevens Point	596	5.84	1,959	1961
Stout	1,026	15.09	1,305	1961
Superior	654	4.16	3,018	1970
Whitewater	794	5.77	2,642	1962
Madison	6,328	4.94	24,595	1964
Milwaukee	1,367	3.0	8,927	1964

III. OFFICES

Offices, like teaching laboratories, are of many different sorts and include many kinds of auxiliary or office-service rooms. The same kind of reasoning that was used in determining the categorization of laboratory preparation rooms was used in categorizing office-service rooms. If a room, such as a mimeograph room, conference room, or the like, served only one office it was categorized as office space and considered as part of the office it served. If the auxiliary room served several offices it was classified as "other active instructional space."

The space analyzed under the classification "office" in this section of the survey is instructional and administrative office space. Offices which are used for research purposes, or which are part of the library, or are used in association with the physical plant or with the functions of extension and public service, are not included in this classification. These other offices are accounted for in the functions which they serve.

Many of the offices serve a dual function; for instance, an instructor may spend fifty per cent of his time in his office doing research, in which case that office will be prorated 50% for instructional office and 50% for research.

The average square feet available for each full-time-equivalent office occupant at the State Colleges is up 2.6 feet from the 1958 figure of 134.4 The University of Wisconsin-Milwaukee has more feet per full-time equivalent occupant than it did in 1958, but is still about six feet below the

Coordinating Committee's recommended 120 feet per FTE occupant. Four State Colleges show a decrease in the number of feet available for each office occupant, but all four are still above the standard. The University of Wisconsin-Madison has 10 fewer feet per FTE occupant, three feet less than the standard. The all-institutional average is down about 2 feet from 1958. Chart 67 presents this data for all institutions.

Another way of looking at the utilization of offices is to determine the number of people who share offices with one another. It is generally recognized that faculty offices are more effectively used when the faculty member does not share his office with another. Certainly the guidance and counseling of students demands privacy if it is to be effective.

For all institutions, 66% of the offices are one-man offices and 20% are two-man offices. In all institutions, the per cent of one-man offices is greater than for any other number of occupants, though River Falls and Whitewater show a substantial proportion of their offices as being occupied by more than one man. Generally it can be said that since the 1958 study there has been a trend toward the development of one-man offices, either by partitioning larger offices or, in the case of Oshkosh, by constructing temporary office partitions in a wide hall-way. Chart 68 presents this data for all institutions.

Chart 69 indicates the proportion of full-time equivalent office workers who have 0-99, 100-140, or over 141 feet at their disposal in offices. In all institutions, 71% of the occupants of offices have 140 feet or less, and 47% have less than 100 feet.

Generally speaking, there is an apparent attempt to keep the space available for offices within the 120 feet per FTE occupant recommended by the Coordinating Committee. Many of those institutions which were above that standard in 1958 have moved in the direction of the standard in 1961 and those which were below the standard in 1958 have tried to increase the space available. The all-institutional average of 122.5 is certainly reasonably close to the standard.

CHART 67

SUMMARY OF OFFICE SPACE AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Assignable Square Feet	Avg. Sq. Feet Per FTE Occ.	Sq. Feet Per Stu. Enrolled
State Colleges			
Eau Claire	15,705	135.9	7.1
La Crosse	15,123	127.1	7.4
Oshkosh	17,508	131.1	6.2
Platteville	17,525	143.4	8.7
River Falls	14,172	128.0	8.4
Stevens Point	16,000	149.5	7.6
Stout	17,123	135.4	10.4
Superior	15,312	157.7	10.7
Whitewater	17,120	130.3	6.6
State College Totals	145,588	136.9	7.8
University			
Madison	262,984	117.6	13.6
Milwaukee	58,925	114.1	9.3
University Totals	321,909	117.0	12.5
All Inst. Totals	467,497	122.5	10.6

CHART 68

THE PERCENT OF FULL-TIME EQUIVALENT STAFF BY ASSIGNABLE SQUARE FEET PER OCCUPANT FOR OFFICES AT WISCONSIN STATE COLLEGES
Fall, 1961

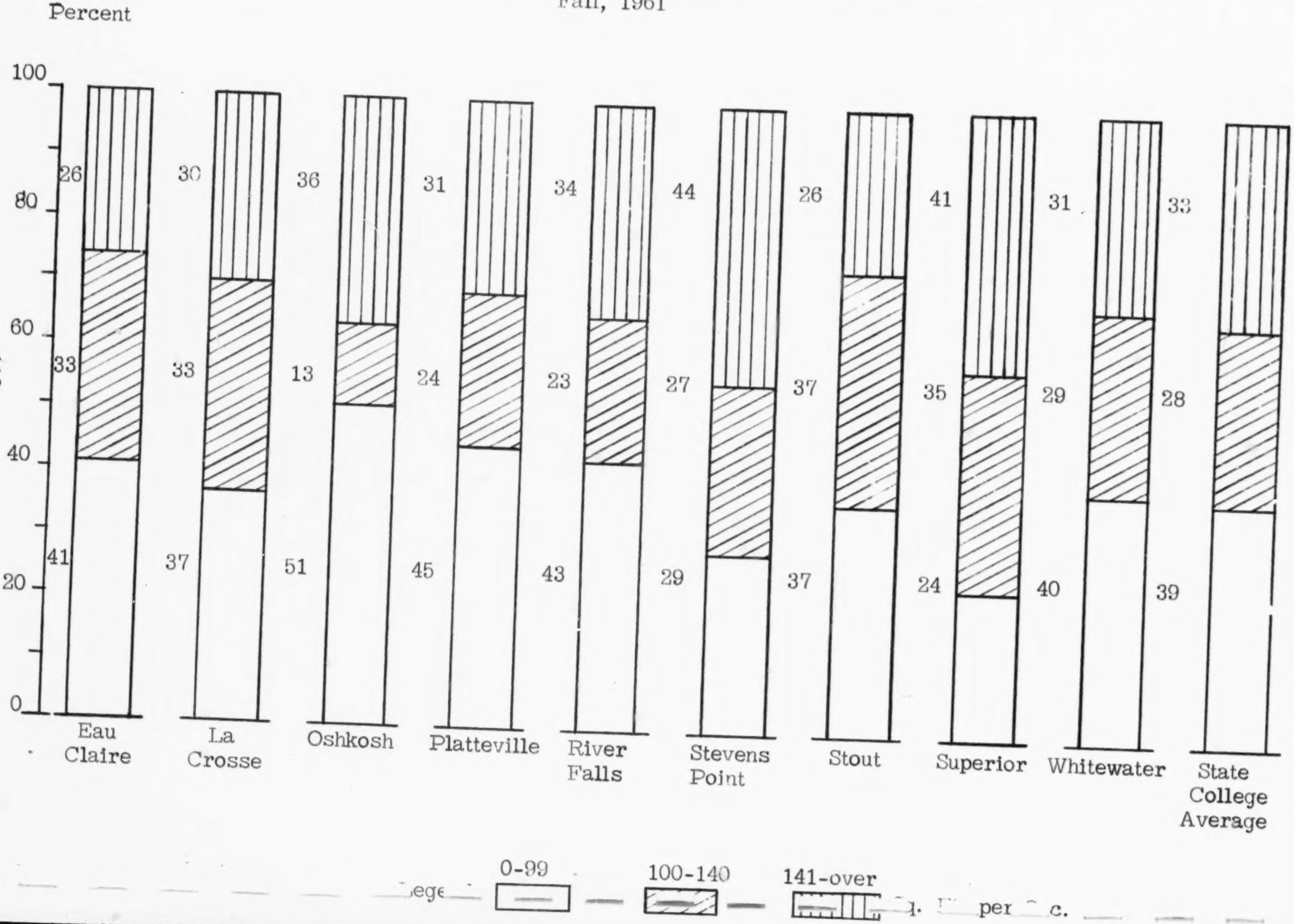


CHART 68 CONT'D

THE PERCENT OF FULL-TIME EQUIVALENT STAFF BY ASSIGNABLE SQUARE FEET PER OCCUPANT FOR OFFICES AT THE UNIVERSITY OF WISCONSIN AND ALL INSTITUTIONS
Fall, 1961

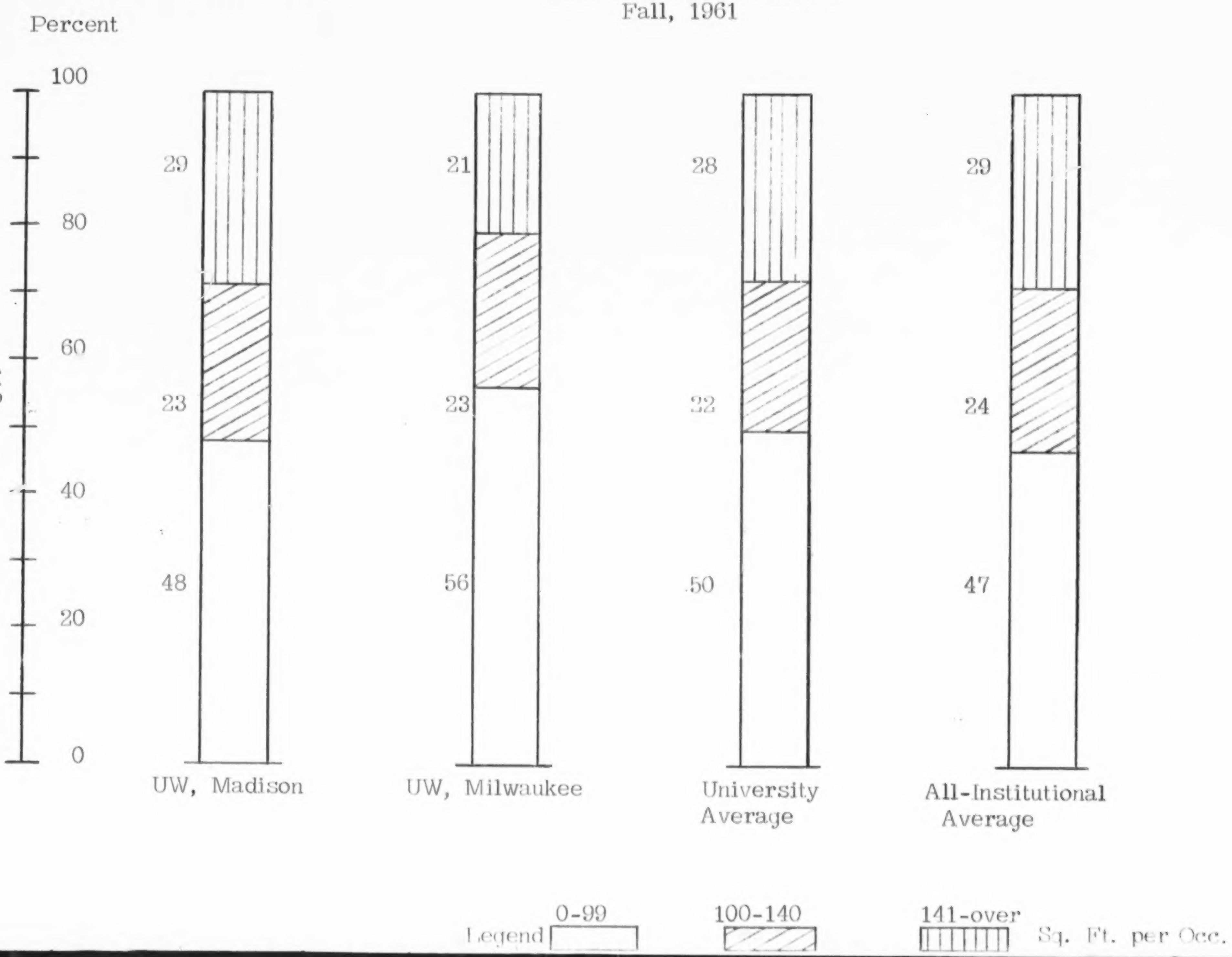
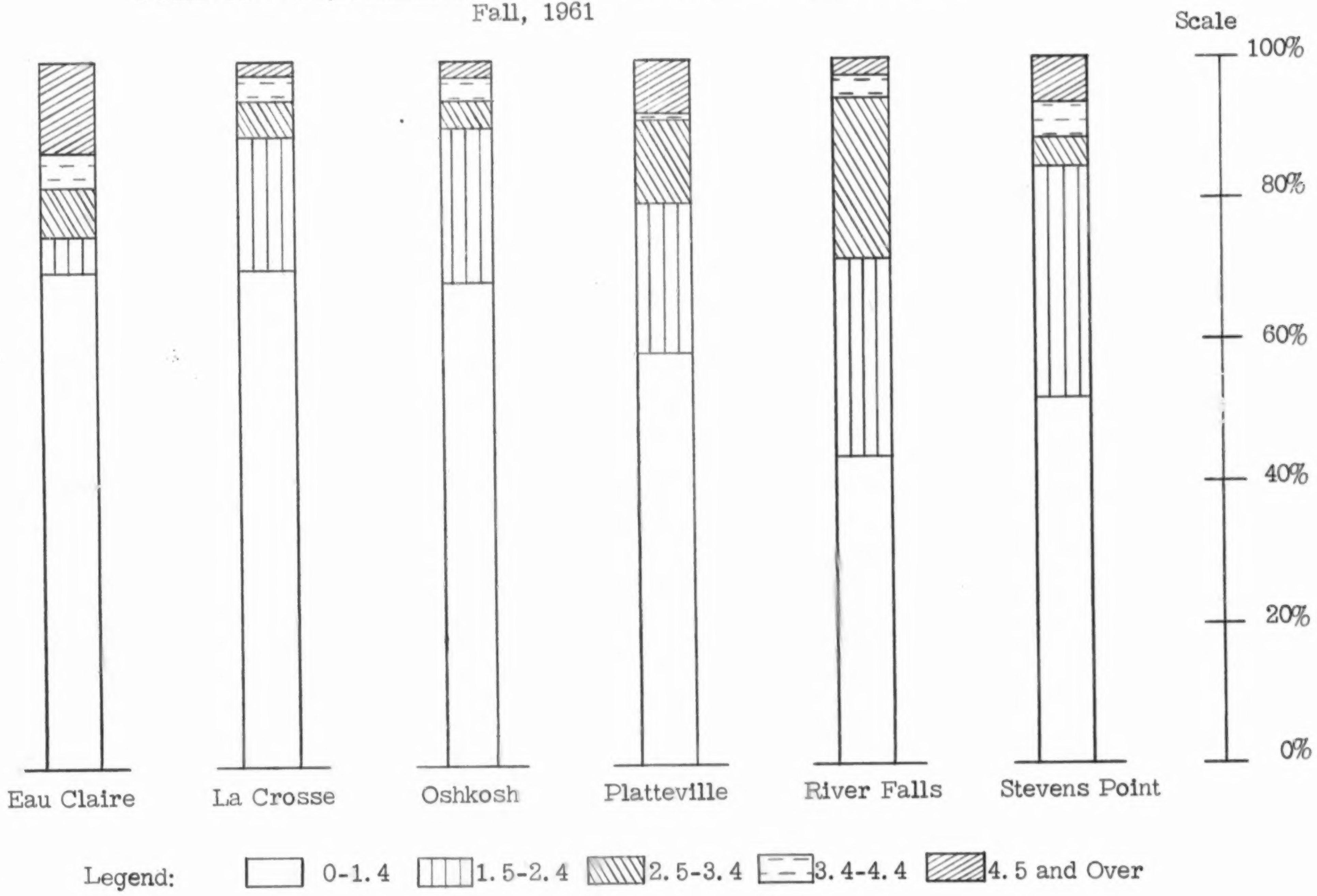


CHART 69

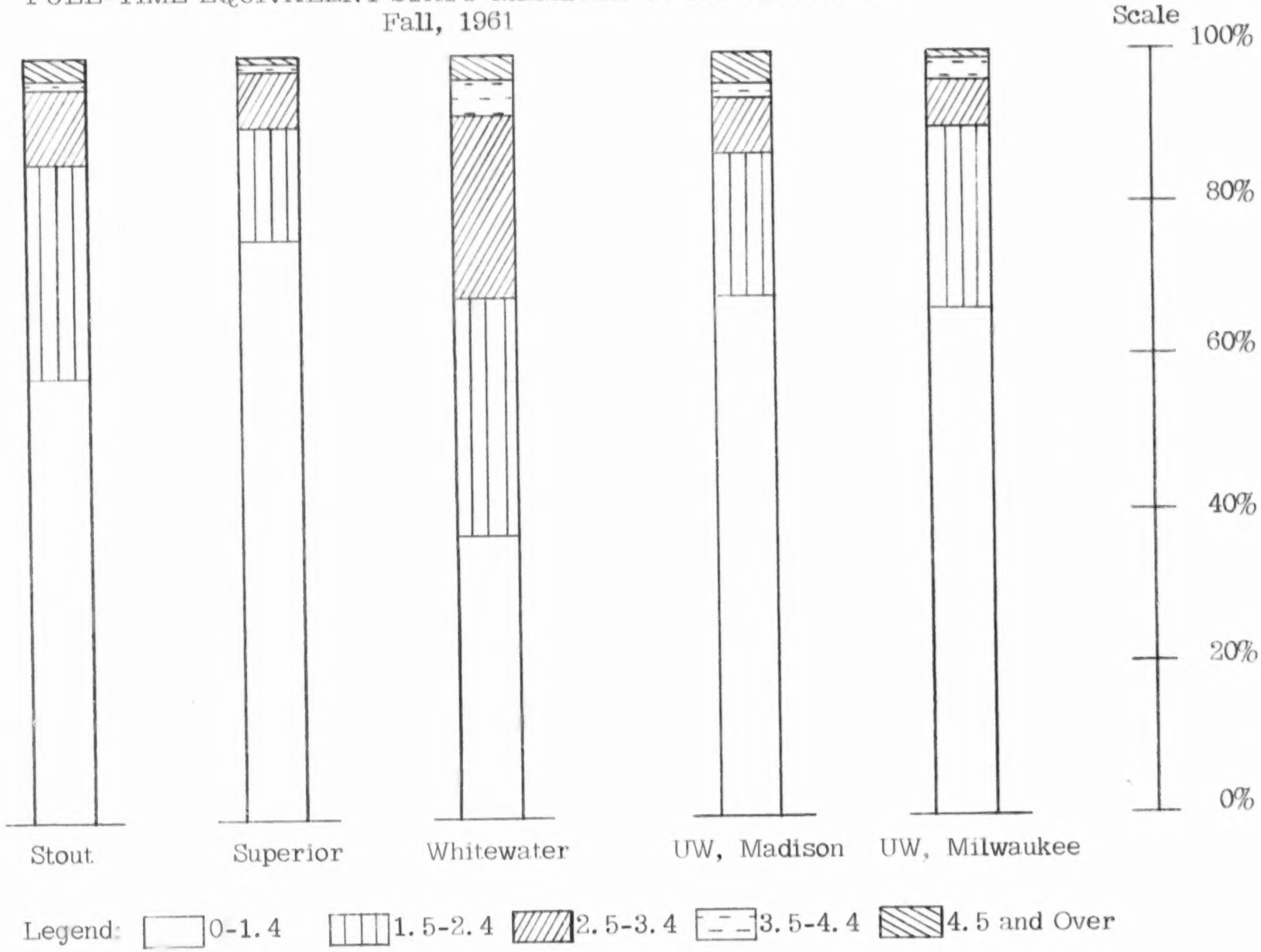
PERCENTAL DISTRIBUTION OF OFFICES ACCORDING TO NUMBER OF FULL-TIME EQUIVALENT STAFF MEMBERS OCCUPYING OFFICE
Fall, 1961



C H A R T 69 CONT'D

PERCENTAL DISTRIBUTION OF OFFICES ACCORDING TO THE NUMBER OF FULL-TIME EQUIVALENT STAFF MEMBERS OCCUPYING OFFICE

Fall, 1961



IV. LIBRARIES

In many instances all of the space in a library building is not used for library purposes; thus in defining "libraries" this study intends to include areas used for the collection, storage, circulation, and use of books, periodicals, manuscripts and other reading and reference materials. This means, in effect, that some portion of most library buildings will be classified as other than library, i.e. classroom, research.

The library facilities at the State Colleges continue to improve with the construction of new library buildings. Oshkosh still continues to show few feet per student enrolled, however, that college has a library building presently under construction. Whitewater also appears crowded, in terms of the number of feet per student enrolled, and that college has a library addition included in the State College 1963-65 priority list. Milwaukee now shows fewer feet per student enrolled than in 1958, and that institution, too, has a library building on the priority list.

Generally, it might be said that most institutions are holding their own, at least for the present, in the matter of library space. The State College and University averages and the all-institutional averages are slightly lower per student enrolled, and this may presage crowding in the libraries in a few years when the enrollments begin their expected dramatic increase.

Of concern is the gradually declining per cent of the student body which can be seated in the library reading rooms. As was reported in 1958, the standards recommended by the American Library Association and others recommend that reading rooms in libraries should seat from 20 to 33 per cent of the student body. The all-institution average in 1961, 14.8 per cent of the students enrolled, is slightly higher than the 1958 average, but the State College average and the Milwaukee average are down. Only two institutions, Eau Claire and La Crosse are able to seat as many as 20% of their students in reading rooms in libraries.

Although library facilities at most of the institutions seem adequate for present enrollments, when it is remembered that most of the institutions have completed new library facilities quite recently and that it may be several years before other new facilities are available, it seems clear that the institutions will continue to be severely crowded for library space: and this represents the heart of any educational program.

CHART 70

PER CENT OF STUDENT BODY THAT CAN BE SEATED IN LIBRARY READING ROOMS, FALL, 1958 AND 1961

	Reading Room Seating As Percent of Enrollments	
Institutions	1958	1961
State Colleges		
Eau Claire	10	20.1
La Crosse	23	20.1
Oshkosh	13	10.2
Platteville	18	17.8
River Falls	27	13.8
Stevens Point	22	9.7
Stout	18	14.6
Superior	12	12.5
Whitewater	17	10.4
State College Average	17	14.2
University		
Madison	12	16.7
Milwaukee	13	11.1
University Average	12	15.3
All Institutions	14	14.8

C H A R T 71

SUMMARY OF LIBRARY SPACE
AT WISCONSIN STATE COLLEGES AND UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Square Feet of Assignable Area Total	Square Feet of Assignable Area Per Student	Total Sq. Feet of Reading Rms.	Seating Capacity	Sq. Feet Reading Rm. Per Seat	Sq. Ft. Offices	Number FTE Occupancy	Sq. Feet Off. Per FTE Occ.
State Colleges:								
Eau Claire	28,947	13.1	9,376	446	21.0	1,370	7.0	195.7
La Crosse	24,033	11.8	13,231	411	32.2	551	3.0	183.7
Oshkosh	8,908	3.1	5,463	290	18.8	632	5.0	126.4
Platteville	25,987	12.9	8,393	359	23.4	2,257	10.8	209.9
River Falls	17,994	10.7	5,950	231	25.8	1,023	6.0	170.5
Stevens Point	21,020	10.0	7,850	205	38.3	1,320	6.0	220.0
Stout	17,238	10.4	5,322	242	22.0	738	6.5	113.5
Superior	11,215	7.8	3,742	180	20.8	485	4.0	121.3
Whitewater	15,215	5.9	5,728	270	21.2	1,228	9.4	130.6
State Col. Total:	170,557	9.2	65,055	2,634	24.7	9,604	57.7	166.4
University:								
Madison	257,208	13.3	75,755	3,240	23.4	5,664	58.8	96.3
Milwaukee	39,064	6.2	19,251	706	27.3	2,147	17.0	126.3
University Total:	296,272	11.5	95,006	3,946	24.1	7,811	75.8	103.0
Grand Total:	466,829	10.5	160,061	6,580	24.3	17,415	133.5	130.4

V. AUDITORIUMS, THEATERS, AND ASSEMBLY HALLS

An auditorium is defined as a room possessing a stage, audience seating and facilities for the purpose of presenting dramatic plays, concerts and similar events. This classification does not include stadiums or field houses, or other space of a similar nature which are more properly classified as physical education or inter-collegiate athletics.

Auditoriums, theaters, and assembly halls are intrinsic to the instructional programs of institutions of higher education. Most of these areas are used at least part of the time as large classrooms. It is a rare auditorium or assembly hall which does not show some use as a large lecture room, though for the most part when they are used as classrooms their student station use is not high. The program of speech and drama departments requires that theaters be available for the production of plays. Music classes and concerts are often held in this area.

The number of square feet of auditoriums, theaters, and assembly halls per student enrolled has declined from the 1958 averages. The all-institutional average is down .7 of a foot. All institutions except Superior show some decline in the square feet per student enrolled.

Although the per cent of the students enrolled who can be seated in auditoriums, theaters, and assembly halls seems large for some institutions, it must be remembered that this does not mean that this per cent of the student body can be seated in one room, but rather that this per cent of the student body can be seated in the number of rooms that make up this class of facilities. For instance, although Superior can seat 65.6% of its student body in both of its auditoriums, it can seat only 40% in the largest of its auditoriums. Viewed in this light it is apparent that auditorium facilities at most of the institutions are inadequate or will soon be inadequate to handle enrollments.

CHART 72

SUMMARY OF AUDITORIUM AND LITTLE THEATER AREAS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institution	Total Assignable Sq. Feet*	Sq. Feet Per Student Enrolled	Number of Seats	Seating as Per Cent of Enrollment
State Colleges:				
Eau Claire	13,116	5.9	1,188	53.6
La Crosse	10,803	5.3	1,225	60.0
Oshkosh	2,002	0.7	584	20.5
Platteville	9,018	4.5	842	41.7
River Falls	8,141	4.8	926	55.1
Stevens Point	9,766	4.6	765	36.4
Stout	7,808	4.7	420	25.4
Superior	14,473	10.1	942	65.6
Whitewater	5,952	2.3	906	35.0
State College Total:	79,079	4.2	7,798	42.0
University				
Madison	22,348	1.2	4,534	23.4
Milwaukee	6,159	1.0	590	9.3
University Total:	28,507	1.1	5,124	19.9
All Institutions:	107,136	2.4	12,922	29.2

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* Area prorated according to split-function use.

VI. OTHER ACTIVE INSTRUCTIONAL SPACE

This category of space includes all instructional areas not otherwise assignable to categories previously listed, areas which serve more than one laboratory, classroom or office. It ought to be emphasized that this is far from being simply a miscellaneous category. The storage space, laboratory preparation rooms, office service rooms, conference rooms, reading rooms, home management houses, animal quarters, music practice rooms, and greenhouses which are included in this category are all vital to the programs of the institutions which report the presence of these kinds of areas. A reduction of space in many of these areas could seriously harm the programs which require them.

Although several institutions show some increase in the number of feet assignable to other active instructional space, enrollments have increased even more. The all-institutional average for the number of feet of other active instructional space per student enrolled is down by 1.3 feet from the 1958 average. The State College average square feet per student enrolled is down .7 of a foot and the University average is down 1.4 feet.

In the State Colleges the greatest loss appears in the departmental reading rooms. In 1958 the colleges showed 1,469 feet devoted to this function, in 1961 this was reduced to 306 feet, all located in Whitewater. The University at both campuses shows a decrease in number of feet assignable to departmental reading rooms, a decrease of some 8,000 feet.

Madison also shows a marked decrease in departmental storage and in laboratory preparation space.

The continued decrease in square feet per student for such purposes as laboratory preparation rooms, reading rooms, home management houses, music practice rooms, etc., severely handicaps efforts to provide a first class education to the students and presents another measure of the crowded conditions.

C H A R T 73

OTHER ACTIVE INSTRUCTIONAL SPACE
AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

			Distribution of Assignable Square Feet by Function									
Institutions	Total	Sq. Ft. Per Stu. Enrolled	Dept. Storage	Lab. Prep.	Office Serv.	Conf. Rooms	Read'g Rms.	Home Mgmt.	Animal* Quarters	Music Pract.	Green Houses	Other
State Colleges												
Eau Claire	9, 258	4. 2	2, 150	276	2, 272	324			320	1, 281	640	1, 995
La Crosse	7, 311	3. 6	3, 218	54	234	1, 365				872	392	1, 176
Oshkosh	6, 248	2. 2	1, 739	1, 039	140	493				2, 363	240	234
Platteville	13, 240	6. 6	3, 650	3, 699	366	1, 387			3, 429		295	414
River Falls	5, 370	3. 2	450		610	1, 403				2, 627	168	112
Stevens Point	5, 670	2. 7	610					2, 285		2, 775		
Stout	27, 702	16. 8	15, 679	1, 279	170	618		6, 769		1, 179		2, 008
Superior	16, 369	11. 6	8, 220		993	1, 227				377	2, 289	3, 263
Whitewater	10, 587	4. 1	4, 314	1, 321	508	595	306			1, 395		2, 148
State Col. Total	101, 755	5. 5	40, 030	7, 668	5, 293	7, 412	306	9, 054	3, 749	12, 869	4, 024	11, 350
University												
Madison	243, 611	12. 6	85, 549	29, 283	10, 359	17, 977	10, 189	4, 145	5, 621	8, 971	4, 730	66, 787
Milwaukee	40, 132	6. 3	19, 885	2, 275	1, 544	2, 398	144		400	732	1, 863	10, 891
University Total	283, 743	11. 0	105, 434	31, 558	11, 903	20, 375	10, 333	4, 145	6, 021	9, 703	6, 593	77, 678
Grand Total	385, 498	8. 7	145, 464	39, 226	17, 196	27, 787	10, 639	13, 199	9, 770	22, 572	10, 617	89, 028

* Exclusive of farms which were not included in the study.

VII. SUMMARY OF ASSIGNABLE SQUARE FEET PER STUDENT ENROLLED FOR ACTIVE INSTRUCTIONAL AREA

Most of the information contained in Chart 74 has been presented in the discussion of the several functional areas which constitute active instructional space, however, it is reproduced here in this form for ease of comparison.

The assignable square feet per student enrolled for all active instructional areas has decreased when all the institutions are considered together. When it is remembered that the great tide of students has not yet arrived, these decreases take on a serious import. In effect, the straining of facilities at the institutions so far is due to an increased interest in college going rather than to an increase in the number of students of college age. One can only imagine with great concern what may happen within the next three years to facilities if construction does not keep pace with enrollments, which are certain to rise rapidly starting in 1964.

The University of Wisconsin-Madison has experienced substantial decreases in the assignable square feet per student enrolled in classrooms, laboratories, offices, and other active instructional space. The State College system shows a decrease in laboratories, libraries and other active instructional space. Oshkosh and Whitewater State Colleges show the most consistent decline in square feet per student enrolled in all active instructional areas, since 1958. The area within which most of the colleges show some decline is libraries.

CHART 74

ASSIGNABLE SQUARE FEET PER STUDENT ENROLLED FOR ACTIVE INSTRUCTIONAL ARE AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

Institutions	Classrooms	Laboratories	Offices*	Libraries	Auditorium	Other
State Colleges:						
Eau Claire	13.6	9.0	7.1	13.1	5.9	4.2
La Crosse	12.0	4.8	7.4	11.8	5.3	3.6
Oshkosh	10.9	7.6	6.2	3.1	.7	2.2
Platteville	16.9	21.5	8.7	12.9	4.5	6.6
River Falls	10.8	18.5	8.4	10.7	4.8	3.2
Stevens Point	13.6	11.6	7.6	10.0	3.7	2.7
Stout	12.4	41.7	10.4	10.4	4.7	16.8
Superior	19.7	18.8	10.7	7.8	10.1	11.6
Whitewater	10.0	6.1	6.6	5.9	2.3	4.1
State College Average:	13.0	14.1	7.8	9.2	4.2	5.5
University:						
Madison	9.7	14.7	13.6	13.3	1.2	12.6
Milwaukee	11.4	7.1	9.3	6.2	1.0	6.3
University Average	10.2	12.7	12.5	11.5	1.1	11.0
All-Institutional Avg.	11.4	13.4	10.6	10.5	2.4	8.7

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* Instructional offices only

ACTIVE NON-INSTRUCTIONAL SPACE

VIII. RESEARCH

The major portion of the research done at Wisconsin's public institutions of higher education is accomplished at the University of Wisconsin-Madison which has 24.1 per cent of its total assignable area devoted to research in 1961, compared with 20 per cent in 1958. New construction at Madison has added some 73,000 feet of research space since the 1958 survey. The State Colleges show substantially the same number of feet devoted to research in 1961 as they did in 1958, 2,899 square feet. Milwaukee has shown a substantial increase in research space, primarily as a result of the construction of a new science building which contains many research laboratories.

The funds available for research at the Madison campus of the University have increased 49% since 1958, although the number of feet assigned to research has increased only 29%. Since the inception of the Coordinating Committee in 1955, funds available for research at the University of Wisconsin have increased 161 per cent. These figures surely indicate the great demand that the University is experiencing for more research. It should be noted that the facilities survey figures represent all research space except for that devoted to medical research, and that in farm buildings.

There can be little doubt that the future will see an increasing need for research space at the State Colleges and the University of Wisconsin Milwaukee. The Coordinating Committee has taken the position that the University of Wisconsin-Madison should continue to be the research arm of the state, but that research and scholarly activities should be encouraged among all the faculty members of both the University and the State Colleges. As the State Colleges increase their efforts in graduate instruction they will require an increasing amount of research space.

CHART 75

RESEARCH SPACE AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institution	Assign. Sq. Ft.	Assign. Sq. Ft. Res. Offices	Sq. Ft. Per F.T.E. Occupant	Assign. Sq. Ft. Labs.	Assign. Sq. Ft. Other Res. Space
State Colleges					
Platteville	189			189*	
River Falls	534				534*
Stevens Point	322				322*
Stout	1,854	148*			1,706*
State College Total	2,899	148		189	2,562
University					
Madison**	669,043	120,909	90.9	330,644	217,490
Milwaukee	20,664	2,500	59.5	15,027	3,137
University Total	689,707	123,409	89.9	345,671	220,627
Grand Total	692,606	123,557		345,860	223,189

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* Space available for general faculty use

** Excludes medical research

IX. EXTENSION AND PUBLIC SERVICE

Extension and public service space is that used for service directed to general public adult education, correspondence courses, public lectures, radio and television, state-wide service units, public museums and exhibition rooms. The major portion of the category of space is located at the University of Wisconsin-Madison, which has a large extension and public service program.

In 1958, four State Colleges reported extension and public service areas, whereas in 1961 only three report footage in this category. The University of Wisconsin-Milwaukee shows a small decrease in space available for extension and public service, while Madison shows an increase of 13,783 feet. This represents about 5% of the total assignable area at the University of Wisconsin-Madison.

CHART 76

EXTENSION AND PUBLIC SERVICE AREA AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institution	Assignable Square Feet	Avg. Sq. Feet of Office Space Per F. T. E. Staff	Average Sq. Feet Per Student Enrolled
State Colleges:			
Oshkosh	1,242		*
River Falls	580		*
Stevens Point	5,192		2.5
State College Total:	7,014		*
University:			
Madison	143,985	101.1	7.4
Milwaukee	2,856	105.6	*
University Total:	146,841	101.3	5.7
Grand Total:	153,855		6.0

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* Less than .5

X. PHYSICAL EDUCATION

In this category of space is included all area assignable to physical education and athletics except classrooms, offices and areas devoted to inter-collegiate athletics. Space devoted to inter-collegiate athletics appears as one breakdown under the classification of auxiliary enterprises.

Although the assignable square feet of physical education space per student enrolled at the State Colleges is .4 of a foot greater now than it was in 1958, the only institutions which do not have fewer feet per student enrolled are those which have added a physical education building since the 1958 study, Platteville, River Falls, and Stevens Point. All other institutions show a decrease in square feet per student enrolled. Whitewater has the smallest number of feet per student at the State Colleges, 6.3, followed by Eau Claire, Stout, and Superior. Stout shows a decrease in the actual number of feet available for physical education, but that institution presently has a physical education building in the planning stage. La Crosse, which shows a small decrease in number of square feet available for physical education and a decrease of over 2 feet per student enrolled, also has a physical education in the planning stage. It is worthwhile to note again at this point, that the quality of these buildings was not considered in this survey, only the amount of space available. At some of the institutions, however, the physical education buildings need replacing because they are in poor condition, even to the point of being dangerous to use.

Madison and Milwaukee both report a decrease in the actual number of square feet available for physical education and in the square feet available for each student enrolled. The University total for the number of feet available in this function is down over 10,000 feet from 1958 and the square feet per student enrolled is down 1.2 feet.

In smaller institutions, the number of feet per student enrolled will necessarily be larger than in larger institutions. Playing floors and other special areas such as swimming pools are of a more or less standard size and cannot be adjusted to the size of a student body.

CHART 77

SUMMARY OF PHYSICAL EDUCATION AREAS
AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

			Seating Area				Locker Rooms					
			Main		Balcony		Men		Women			Sq. Ft. Per Stu.
Institutions	Total	Playing Floors	Sq. Ft.	# Seats	Sq. Ft.	# Seats	Sq. Ft.	Lockers	Sq. Ft.	Lockers	Other	Enrolled
State Colleges												
Eau Claire	20,646	7,268	5,760	1,430	4,593	1,260	880	104			1,470	9.3
La Crosse	33,763	14,118	1,218	550	2,460	325	3,958	1,024	924	246	11,085	16.5
Oshkosh	37,783	13,688	5,076	2,000			3,052	591	2,800	452	13,167	13.3
Platteville	41,266	9,150	14,309	3,000	3,096	500	3,104	100	2,143		10,464	20.4
River Falls	34,584	14,593	5,451	1,894			3,129	512	1,246	199	10,165	20.6
Stevens Pt.	40,464	23,451[1]			1,291	150	1,963	1,139	1,161	780	12,598	19.2
Stout	16,858	5,163					681	265	758	234	10,256	10.2
Superior	15,427	9,737[2]	2,676	900	1,661	500	1,251	105	1,343	74	1,093	10.7
Whitewater	16,251	7,683		360	1,710	175	1,012	200	1,956	200	3,890	6.3
State College Total	257,042											13.8
University												
Madison	67,207	36,075	335	21			5,315	3,541	7,727	1,107	17,755	3.5
Milwaukee	25,013	9,472	2,680	750	1,608	250	1,636	305	2,693	259	6,924	3.9
Univ. Total	92,220											3.6
Grand Total	349,262											7.9

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[1] Includes seating area of movable seats.

[2] Main playing floor area, regardless of split function use.

C H A R T 78

FACILITIES PROVIDED FOR PHYSICAL EDUCATION AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

Institutions	Swimming	Wrestling & Boxing	Track	Basketball	Tennis	Indoor Baseball	Baseball	Volleyball	Badminton	Gymnastics	Jumping Pit	Fencing	Bowling	Handball Cts.
State Colleges:														
Eau Claire		X		X				X	X	X				
La Crosse	X			X				X	X	X				
Oshkosh	X	X		X		X	X	X	X	X				
*Platteville	X	X	X	X	X	X	X	X	X	X				X
River Falls	X	X	X	X	X	X		X	X	X	X	X		X
Stevens Point	X	X	X	X	X	X	X	X	X	X	X			X
Stout	X	X	X	X	X	X		X	X	X				
Superior		X	X	X	X		X	X	X	X				
Whitewater	X	X	X	X	X	X		X	X	X				
University:														
Madison	X	X	X	X	X	X		X	X	X		X	X	X
Milwaukee	X	X	X	X	X	X		X	X	X				X

XI. LABORATORY SCHOOLS

Only areas assigned to laboratory school functions are included in this category of space. In effect this means that a laboratory school building may not be reported as having only a laboratory school function if some areas are used for collegiate instruction.

Eight of the colleges have laboratory schools. Stout instructs high school students in college laboratories and so prorates some of its collegiate space for laboratory school purposes.

All institutions except Eau Claire, Oshkosh, Superior, and Whitewater show essentially the same number of square feet for laboratory school functions in 1961 as they did in 1958. Superior and Whitewater have added new laboratory schools and so show a greater number of feet in this function. Eau Claire has increased its laboratory school area as a result of remodeling. Oshkosh shows fewer feet in laboratory school as a result of shifting the use of some rooms in the laboratory school to collegiate use.

Inasmuch as the State Colleges place considerable emphasis on the training of teachers, they show a greater number of square feet per student enrolled than does the University at either campus. At both the State College systems and the University system the average square feet per student enrolled is less than it was in 1958, due to the fact that there were very few additions to the laboratory school function in relation to the increase in enrollments.

LABORATORY SCHOOL AREA AND FUNCTIONAL BREAKDOWN
WISCONSIN STATE COLLEGES AND UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Total Sq. Ft. Lab. School	Classrooms	Labs.	Office	Avg. Office Space (FTE)	Storage	Library	Phy. Ed.	Misc.	Sq. Ft. Per Stud. Enrolled
State Colleges:										
Eau Claire	24, 192	9, 144	1, 448	1, 641	102. 6	266	1, 550	2, 270	7, 873	10. 9
La Crosse	27, 527	11, 771	1, 215	1, 167	194. 5	27	1, 855	5, 817	5. 675	13. 5
Oshkosh	30, 475	13, 553	1, 586	1, 677	129. 0	700	846	5, 059	7, 054	10. 7
Platteville	27, 184	13, 101	2, 559	1, 181	131. 2	1, 650	731	3, 990	3, 972	13. 5
River Falls	12, 775	8, 036	941	2, 117	176. 4	466	903		312	7. 6
Stevens Point	30, 762	13, 049	4, 403	3, 558	136. 8	2, 134	2, 522	4, 858	238	14. 6
Stout*	7, 326	2, 181	5, 145							
Superior	28, 686	10, 508	4, 917	2, 164	144. 3	94	2, 716	5, 229	3, 058	20. 0
Whitewater	29, 603	9, 504	2, 481	2, 385	140. 3	938	1, 674	5, 464	7, 157	11. 4
State College Total:	218, 530	90, 847	24, 695	15, 890	139. 4	6, 275	12, 797	32, 687	35, 339	12. 5
University:										
Madison	37, 116	5, 908	14, 203	3, 549	95. 9	1, 323	2, 821	6, 879	2. 433	1. 9
Milwaukee	38, 234	17, 708	3, 264	2, 818	148. 3	2, 724	1, 404	4, 360	5, 956	6. 0
University Total:	75, 350	23, 616	17, 467	6, 367	115. 8	4, 047	4, 225	11, 239	8, 389	2. 9
Grand Total:	293, 880	114, 463	42, 162	22, 257	131. 7	10, 322	17, 022	43, 926	43, 728	6. 7

* Stout has no laboratory school, but instructs high school students in college labs for student teaching purposes. These figures excluded from State College totals.

XII. AUXILIARY ENTERPRISES

Included in this category are all areas devoted to revenue-producing operations such as inter-collegiate athletics, student unions, cafeterias, stores, clothing and book locker rooms, student and faculty lounges, and student organization rooms.

In 1958 the construction of student unions at the State Colleges had not yet been completed and so was not included in the 1958 study. The great increase in assignable square feet devoted to auxiliary enterprises this year reflects the inclusion of the State College student unions. All colleges report an increase in the total assignable square feet devoted to this function and all except Eau Claire have more feet per student enrolled than they did in 1958. The great increases in auxiliary enterprises appear in cafeterias, lounges and student activities. The State Colleges show a decrease in the number of square feet assigned to inter-collegiate athletics, as does the University of Wisconsin-Madison.

The Milwaukee campus of the University shows a slight increase in the number of feet assigned to auxiliary enterprises, though Milwaukee shows a decrease in assignable square feet per student enrolled. It is noteworthy that Milwaukee has the smallest number of feet per student enrolled, 7.4. Madison reports some increase in space allotted to auxiliary enterprises, but shows a decrease in number of feet per student enrolled. The increase is due primarily to the inclusion of the Breeze Terrace Cafeteria which was omitted from the 1958 study. The Memorial Union has 112,246 feet of space for which no breadkown was available.

CHART 80

AUXILIARY ENTERPRISE AREA AND FUNCTIONAL BREAKDOWN WISCONSIN STATE COLLEGES AND UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Total	Sq. Ft. Per Stu. Enrolled	Offices	Per (FTE) Office	Cafeteria	Stores	Stu. Act.	Lounges	Other Stu. Areas	Inter-Col. Ath.	Health	Misc.
State Colleges:												
Eau Claire	32,238	14.5	707	88.3	14,549	1,644	5,283	5,633	1,176	2,331	777	138
La Crosse	59,621	29.2	1,059	132.4	17,153	563	25,410	8,317	186	1,790	1,035	4,108
Oshkosh	38,538	13.6	180	60.0	10,315	1,756	10,075	6,502	414	5,324	1,680	2,292
Platteville	35,827	17.8	346	86.5	16,546	343	4,924	4,396	6,144	1,051	1,382	695
River Falls	37,403	22.3	243	121.5	13,727	477	5,796	5,009	6,514	2,869		2,768
Stevens Point	34,188	16.2	666	333.0	14,751	4,156	5 147	6,565	1,972		682	249
Stout	28,912	17.5	455	455.0	4,718	2,399	9,342	5,546	2,984	3,270		198
Superior	40,126	27.9	852	213.0	15,049	3,259	1,750	5,687	3,856	4,661	475	4,537
Whitewater	41,688	16.1	248	62.6	16,839	3,286	9,653	6,154		1,086	1,102	3,320
State Col. Total:	348,541	18.8	4,756	135.9	123,647	17,883	77,380	53,809	23,246	22,382	7,133	18,305
University:												
Madison	313,662[1]	16.2[1]	12,491	208.2	23,743	36,692	4,468	7,515	1,897	196,892		29,964
Milwaukee	46,931	7.4	844	105.6	10,382	5,094	3,320	8,055	810	14,759	937	2,730
University Total:	360,593	14.0										
Grand Total:	709,134	16.0										

[1] In addition, the Memorial Union has 112,256 assignable square feet for which there was no functional breakdown. The square feet per student enrolled includes the Memorial Union.

XIII. PHYSICAL PLANT

Physical plant space is space used for the maintenance of all the buildings in an institution, not space used for a single building. Thus, carpenter shops, electrical shops, storerooms, boiler rooms and main heating plants which serve the whole institution are properly classified as physical plant space. On the other hand, areas that service a single building, janitors closets or furnace rooms in frame houses, are classified as custodial service rather than physical plant.

Except for Whitewater and Superior, which show increases in square feet assignable to this function, and River Falls which shows a decrease, the State Colleges remain essentially the same as they were in 1958. Whitewater and Superior have added general storage space which accounts for their increases, while River Falls has had to convert some of its storage space to instructional space, accounting for its decrease.

Both Madison and Milwaukee show some increase in square feet assignable to physical plant. Madison has added a new heating plant since the 1958 survey.

CHART 81

PHYSICAL PLANT AREA AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Assignable Sq. Feet	Sq. Ft. Assigned to Offices	Sq. Ft. Per F.T.E. Occupant	Sq. Ft. Per Student Enrolled
State Colleges				
Eau Claire	9,679	160	160	4.4
La Crosse	9,291	80	80	4.5
Oshkosh	10,133			3.6
Platteville	11,940	202	50.5	5.9
River Falls	7,005	162	162	4.1
Stevens Point	7,462			3.5
Stout	11,466	145	72.5	6.9
Superior	10,735	262	262	7.5
Whitewater	13,787	112	112	5.3
State College Totals	91,498	1,123	102.1	4.9
University				
Madison	137,250	9,825	166.5	7.1
Milwaukee	13,459	1,183	147.0	2.1
University Totals	150,709	11,008	164.3	5.9
Grand Totals	242,207	12,131	155.5	5.5

XIV. OTHER ACTIVE NON-INSTRUCTIONAL AND INACTIVE AREAS

Eau Claire, La Crosse and Madison show decreases in other active non-instructional space. Four Colleges and Milwaukee show some increase. In all cases the proportion of the total net space assignable to other active non-instructional space is negligible.

The Inactive area has increased at the State Colleges and at the University. Three colleges show a decrease, Eau Claire, Oshkosh and River Falls. Most of these areas are inactive either while being remodeled or in anticipation of remodeling. Thus a small number of feet assigned to this category means that only a little remodeling is underway whereas a large number of feet means that considerable remodeling is underway or being anticipated.

CHART 82

OTHER ACTIVE NON-INSTRUCTIONAL AND INACTIVE AREAS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Assignable Sq. Ft. of O.A.N.I.	% of Total Assign. Area	Assign. Sq. Ft. Inactive Area	% of Total Assign. Area
State Colleges				
Eau Claire	707	.34	1,033	.50
La Crosse	882	.40	597	.27
Oshkosh	2,486	1.2	320	.15
Platteville	977	.36	13,678	5.0
River Falls	--		13,471	6.6
Stevens Point	1,201	.53	350	.16
Stout	1,995	.78	27,066	10.6
Superior	2,856	1.33	4,069	1.89
Whitewater	1,776	.91	871	.45
State College Total	12,880	.72	61,455	.31
University				
Madison	6,688	.24	24,972	.90
Milwaukee	411	.10	21,653	4.87
University Total	7,099	.22	46,625	1.45

XV. SUMMARY OF ASSIGNABLE SQUARE FEET PER STUDENT ENROLLED FOR NON-INSTRUCTIONAL SPACE

In some cases the assignable square feet per student enrolled is only slightly or not at all related to the needs of the institution for non-instructional space. Extension and public service and physical plant are cases in point. The data is presented, however, as a means of comparing the 1958 study with this one.

It will be noted that the work of the several institutions is reflected in the kind of non-instructional space available. Thus, the University at Madison has by far most of the research and extension and public service space, whereas the state colleges contain most of the laboratory school space.

At the State Colleges there has been a decrease in square feet per student enrolled in all non-instructional space except auxiliary enterprises. Here the increase was due to the addition of student unions. Both Madison and Milwaukee have experienced increases in the assignable square feet per student enrolled in research space and physical plant space. All other non-assignable areas show a decrease.

SQUARE FEET PER STUDENT ENROLLED FOR NON-INSTRUCTIONAL AREA AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

Institutions	Research	Ext. & Public Service	Phy. Ed.	Lab. School	Auxiliary Enterprise	Physical Plant	O. A. N. I.
State Colleges:							
Eau Claire			9.3	10.9	14.5	4.4	.3
La Crosse			16.5	13.5	29.2	4.5	.4
Oshkosh		*	13.3	10.7	13.6	3.6	.9
Platteville	*		20.4	13.5	17.8	5.9	.5
River Falls	*	*	20.6	7.6	22.3	4.1	
Stevens Point	*	2.5	19.2	14.6	16.2	3.5	.6
Stout	1.1		10.2		17.5	6.9	1.2
Superior			10.7	20.0	27.9	7.5	2.0
Whitewater			6.3	11.4	16.1	5.3	.7
State College Average:	*	*	13.8	12.5	18.8	4.9	.7
University:							
Madison	34.5	7.4	3.5	1.9	16.2	7.1	.3
Milwaukee	3.3	*	3.9	6.0	7.4	2.1	.1
University Average:	26.8	5.7	3.6	2.9	14.0	5.9	.2
All Institutional Average:		6.0	7.9	6.7	16.0	5.5	.5

* Less than one foot per student enrolled.

XVI. NON-ASSIGNABLE AREAS

For the purpose of this study non-assignable floor space is defined as: All areas which cannot be assigned to a specific agency.

Circulatory Space. Included are corridors, lobbies, hallways, stairs and stairwells, elevators and vestibules. Waiting rooms which are walled off from the hallway and are used in conjunction with specific offices are included under office space. Waiting rooms which are a part of the corridor or vestibule are included in this category.

Rest Rooms. All public rest rooms are included. Faculty and student lounges are included in auxiliary enterprises category. Rest rooms used in conjunction with individual offices are included with the office space.

Custodial and Service Space. Included are janitorial closets, furnace and boiler rooms (except in main heating plant), pipe space areas, and mechanical equipment rooms. The central heating plant is classified as physical plant space and is not shown in this category.

Non-Usable Space. Included are such areas as attics and unfinished basements even though such space may sometimes be used for dead storage. Space which has been condemned and it is not expected that it will be returned to active use is included.

Chart 84 presents a breakdown of non-assignable space for each institution. It is interesting to note that the state college average and the university average per cent of net square feet devoted to non-assignable space are within .2 of a foot.

CHART 84

NON-ASSIGNABLE FLOOR SPACE AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Non-Assign. Square Feet	% of N. A. S. Devoted to Several Functions				% of Net Sq. Feet Devoted to Non-Assign.
		Circulatory	Rest Rooms	Custodial Service	Non-Usable	
State Colleges						
Eau Claire	68,988	76.5	8.2	15.1	.20	25.1
La Crosse	103,767	51.8	7.5	10.0	30.7	31.7
Oshkosh	67,240	67.6	10.7	13.3	8.4	24.4
Platteville	93,061	70.8	7	14.7	7.5	25.3
River Falls	71,367	62.2	6.7	14.5	16.6	26.2
Stevens Point	60,532	71.3	9.1	10.0	9.6	21.2
Stout	61,630	75.1	11.5	13.4		19.5
Superior	75,620	64.4	6.2	20.4	9.0	26.1
Whitewater	52,062	70.9	11.7	17.4		21.1
State College Total	654,267	66.8	8.4	14.2	10.6	24.6
University						
Madison	886,857	64.9	9.9	15.1	10.1	24.2
Milwaukee	176,838	70.3	7.6	14.6	7.5	28.5
University Total	1,063,695	65.8	9.5	15.1	9.6	24.8
Grand Total	1,717,962	66.2	9.1	14.7	10.0	24.8

XVII. SUMMARY OF SQUARE FEET OF ACTIVE INSTRUCTIONAL, ACTIVE NON-INSTRUCTIONAL, AND NON-ASSIGNABLE AREAS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

The following tables summarize the square feet devoted to each of the functional categories of space discussed in detail in the previous sections of this report. In addition, the tables include the square feet per student enrolled of instructional and non-instructional space.

All of the state colleges report an increase in the total number of feet assignable to instructional space; however, only two colleges, Eau Claire and Superior, show an increase in the assignable square feet of instructional space per student enrolled. Oshkosh and Whitewater are lowest in square feet per student enrolled, at the State Colleges, with 30.7 and 35.0 feet respectively. Stout is highest with 96.4 feet, due to the prevalence of teaching laboratories at that institution with its specialized technical curriculum. The State College average square feet per student enrolled is down 8.7 feet from 1958, to 54.0

The University of Wisconsin, Madison, shows a decrease in the number of feet assignable to instructional area and a substantial decrease of 14.5 feet in the square feet per student enrolled. All categories of instructional space except libraries show a decrease in actual number of feet at the University's Madison campus.

The Milwaukee campus shows an increase in all categories of instructional space and an increase in the square feet of instructional space per student enrolled. Milwaukee, however, has the third smallest number of square feet per student enrolled, next to Oshkosh and Whitewater.

The actual number of feet devoted to non-instructional space at the State Colleges and at the University of Wisconsin has increased. Eau Claire, Oshkosh, Stout, and Milwaukee show a decrease in the square feet per student enrolled in non-instructional space, simply because construction of new facilities has not kept up with the increased pace of enrollments. All other institutions show some increase. Madison shows its greatest increases in actual number of feet assignable to research and extension and public service. It shows its most substantial decrease in the other active non-instructional area. Milwaukee has the smallest number of square feet of non-instructional space per student enrolled, and Madison has the largest.

CHART 85

SUMMARY OF ASSIGNABLE SQUARE FEET OF ACTIVE INSTRUCTIONAL AREA AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

Institutions	Classrooms	Teaching Labs.	Offices	Libraries	Auditorium	Other Active Instr.	Total	Sq. Ft. Per Stud Enrolled
State Colleges:								
Eau Claire	30,289	20,008	15,705	28,947	13,116	9,258	117,323	52.9
La Crosse	24,553	9,704	15,123	24,033	10,803	7,311	91,527	44.8
Oshkosh	30,995	21,517	17,508	8,908	2,002	6,248	87,178	30.7
Platteville	34,230	43,469	17,525	25,987	9,018	13,240	143,469	71.1
River Falls	18,072	31,137	14,172	17,994	8,141	5,370	94,886	56.5
Stevens Point	28,664	24,426	16,000	21,020	9,766	5,670	105,546	50.2
Stout	20,451	68,902	17,123	17,238	7,808	27,702	159,224	96.4
Superior	28,298	27,050	15,312	11,215	14,473	16,369	112,717	78.5
Whitewater	25,880	15,756	17,120	15,215	5,952	10,587	90,510	35.0
State College Total:	241,432	261,969	145,588	170,557	81,079	101,755	1,002,380	54.0
University:								
Madison	188,566	285,482	262,984	257,208	22,348	243,611	1,260,199	65.0
Milwaukee	80,557	50,445	58,925	39,064	6,159	40,132	275,282	43.4
University Total:	269,123	335,927	321,909	296,272	28,507	283,743	1,535,481	59.7
Grand Total:	510,555	597,896	467,497	466,829	109,586	385,498	2,537,861	57.3

SUMMARY OF ASSIGNABLE SQUARE FEET OF ACTIVE NON-INSTRUCTIONAL AREA AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961

Institutions	Research	Ext. & P. S.	Phy. Ed.	Lab. School	Auxiliary Enterprise	Physical Plant	Other Act. Non-Instr.	Total	Sq. Ft. Per Stud. Enrolled
State Colleges:									
Eau Claire			20,646	24,192	32,238	9,679	707	87,462	39.5
La Crosse			33,763	27,527	59,621	9,291	882	131,084	64.2
Oshkosh		1,242	37,783	30,475	38,538	10,133	2,486	120,657	42.5
Platteville	189		41,266	27,184	35,827	11,940	977	117,383	58.2
River Falls	534	580	34,584	12,775	37,403	7,005		92,881	55.3
Stevens Point	322	5,192	40,464	30,762	34,188	7,462	1,201	119,591	56.8
Stout	1,854		16,858	7,326	28,912	11,466	1,995	68,411	41.4
Superior			15,427	28,686	40,126	10,735	2,856	97,830	68.1
Whitewater			16,251	29,603	41,688	13,787	1,776	103,105	39.9
State College Total:	2,899	7,014	257,042	218,530	348,541	91,498	12,880	938,404	50.5
University:									
Madison	669,043	143,985	67,207	37,116	425,918	137,250	6,688	1,487,207	76.8
Milwaukee	20,664	2,856	25,013	38,234	46,931	13,459	411	147,568	23.3
University Total:	689,707	146,841	92,220	75,350	472,849	150,709	7,099	1,634,775	63.6
Grand Total:	692,606	153,855	349,262	293,880	821,390	242,207	19,979	2,573,179	58.1

SUMMARY OF NON-ASSIGNABLE SQUARE FEET AND INACTIVE AREAS
WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

Institutions	Non-Assignable Areas					Inactive Areas
	Circulatory	Rest Rooms	Custodial	Non-Usable	Total	
State Colleges:						
Eau Claire	52, 784	5, 670	10, 434	100	68, 988	1, 033
La Crosse	53, 788	7, 755	10, 396	31, 828	103, 767	597
Oshkosh	45, 428	7, 224	8, 944	5, 644	67, 240	320
Platteville	65, 866	6, 507	13, 680	7, 008	93, 061	13, 678
River Falls	44, 400	4, 753	10, 362	11, 852	71, 367	13, 471
Stevens Point	43, 137	5, 513	6, 077	5, 805	60, 532	350
Stout	46, 297	7, 097	8, 236		61, 630	27, 066
Superior	48, 716	4, 661	15, 447	6, 796	75, 620	4, 069
Whitewater	36, 889	6, 077	9, 096		52, 062	871
State College Total:	437, 305	55, 257	92, 672	69, 033	654, 267	61, 455
University:						
Madison	575, 183	87, 634	134, 272	89, 768	886, 857	24, 972
Milwaukee	124, 352	13, 509	25, 773	13, 204	176, 838	21, 653
University Total:	699, 535	101, 143	160, 045	102, 972	1, 063, 695	46, 625
Grand Total:	1, 136, 840	156, 400	252, 717	172, 005	1, 717, 962	108, 080

XVIII. COMPARISON WITH STUDIES IN OTHER STATES

This report has in the past, as now, attempted to give some indication about the utilization of physical facilities in other states in order to give the readers of this study some figures that might act as a basis for comparison with Wisconsin figures. Each time a facilities survey is completed for the state of Wisconsin, an attempt is made to collect as many as possible of the studies from other states that have been completed since the last Wisconsin survey.

Since the 1958 survey, the following studies from other states have come to our attention and are presented here:

INSTITUTIONAL CAPACITIES AND AREA NEEDS OF CALIFORNIA PUBLIC HIGHER EDUCATION 1960-1975. By the Technical Committee on Institutional Capacities and Area Needs. February, 1961.

NORMATIVE DATA ON THE UTILIZATION OF INSTRUCTIONAL SPACE IN COLLEGES AND UNIVERSITIES. By James I. Doi and Keith L. Scott. July, 1960

COMPREHENSIVE EDUCATIONAL SURVEY OF KANSAS. By Higher Education Study Staff for the Education Committee, Kansas Legislative Council. March, 1960.

THE NEBRASKA STUDY OF HIGHER EDUCATION. By Lyman A. Glenny for The Nebraska Legislative Council Committee on Higher Education. January, 1961.

HIGHER EDUCATION IN SOUTH DAKOTA. By S. V. Martorana and Ernest V. Hollis. September, 1960

INSTRUCTIONAL SPACE UTILIZATION, FALL TERM 1959. COOPERATIVE STUDY NO. 7, by H. M. Silvey. December 30, 1960.

As with most comparisons, there are dangers involved unless certain cautions are observed. Many of the studies do not use the same definitions as the Wisconsin Study. Sometimes, percent of student station utilization is based on a 44 or 45 hour week, whereas at other times it is computed on the basis of the number of hours a week a room is actually used. The objectives of institutions differ, and this will have a bearing on the extent of use of laboratories and classrooms. Institutional policy relative to class size will affect student station utilization. Perhaps most important, the picture of higher education differs greatly from state to state so that it is difficult, for instance, to compare South Dakota utilization figures with California figures. With these cautions in mind, the following charts may still serve as a basis for understanding Wisconsin's utilization figures.

Chart 88 and Chart 89 place Wisconsin institutions within the percentile rankings for the institutions studied by Doi and Scott relative to both room period use and student station utilization. The 99th percentile represents the highest use achieved by the institutions in the study, the 1st percentile the lowest. All Wisconsin institutions except Stout rank above the 50th percentile in room period use for classrooms, and all institutions rank above the 60th percentile for room period use for laboratories. In regard to student station utilization, all the institutions except Superior and Madison rank above the 60th percentile in both classrooms and laboratories.

Chart 90 compares the weekly room use at Wisconsin institutions with that reported in six other state studies. This chart also compares recommended standards at Wisconsin with those in other states which have recommended standards, California and Nebraska. The average room period use for all the Wisconsin institutions is higher than the average for any of the studies reported here, both in classrooms and in teaching laboratories. The standards recommended by the Coordinating Committee for Higher Education are higher than those in California and Nebraska to the extent that the Coordinating Committee recommends 24 hours per week per room in laboratories and the other studies report a recommended 20 hours. It will be recalled that the California standards reported in 1958 were for 24 hours per week per room in laboratories; the new California standards, then, are reduced for teaching laboratories by 4 hours per week.

The all-institutional percent of student stations utilized in Wisconsin classrooms compares favorably with those in the other states included in this comparison. The Municipal University in Nebraska and the Nebraska Teachers Colleges show a greater percent of student station utilization than Wisconsin institutions generally, but the Wisconsin State College average of 60.1 percent student station utilization compares favorably with the Nebraska figure of 61.5.

Comparing the results of the analysis of utilization of classrooms and laboratories in Wisconsin in 1961 with the results reported in the studies from other states which were included in the 1958 Wisconsin facilities survey may also be useful. To generalize: Wisconsin's room period use of classrooms is higher than any of the studies reported in 1958, Colorado, Florida, Minnesota, North Dakota and Tennessee. The Coordinating Committee standards for classroom room period use is higher than all institutions except Tennessee. Wisconsin's room period use for laboratories in 1961 is higher than that reported in all studies except for two institutions in Colorado and one in North Dakota. The Coordinating Committee standards for laboratory use are as high or higher than those reported by studies in other states.

The percent of student stations utilized per week in Wisconsin classrooms is higher than that found in most of the studies reported in 1958, though the Wisconsin all-institutional average is slightly lower than the per cent of utilization reported for several individual institutions. The percent of student stations occupied in laboratories in Wisconsin in 1961 is substantially higher than that reported in most other institutions; Florida, two Colorado institutions, and four state colleges in North Dakota show greater student station utilization than Wisconsin's all-institutional average. The Coordinating Committee's standards are as high or higher than those in any other state.

To summarize, the utilization of classrooms and laboratories in Wisconsin State Colleges and the University of Wisconsin compares most favorably with that achieved by institutions in other states. In most cases the room period use achieved in Wisconsin is higher than that in other states, the student station utilization about the same as that in other states. The standards set by the Coordinating Committee for both room period use and student station utilization are as high or higher than that in most other states.

The percent of student station utilization in Wisconsin teaching laboratories is greater than that in any of the other studies. Here again, however, the Silvey report and the Nebraska report are not directly comparable to the other studies.

The utilization standards recommended by the Coordinating Committee for classrooms are higher than at any of the institutions which reported having standards. The California standards for percent of student stations occupied in classrooms has been reduced by 7 per cent from 67% recommended student station utilization (the present Coordinating Committee standard) to 60% student station utilization. The Technical Committee on Institutional Capacities and Area Needs in California felt that the standards recommended by the California Restudy were not realistic in terms of practical achievement. [1]

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[1] The California and Western Conference Cost and Statistical Study for the year 1954-1955 includes an excellent analysis of physical facilities utilization. However, since that study uses a different basis for measuring utilization than other studies, the figures do not provide comparable information.

C H A R T 88

A COMPARISON OF ROOM PERIOD USE IN WISCONSIN INSTITUTIONS WITH ROOM PERIOD USE IN 90 PUBLIC DEGREE-GRANTING INSTITUTIONS IN THE UNITED STATES[1]

Fall, 1961

Percentile Ranking	Classrooms	Laboratories (88 Inst's)
99		
	UW, Madison Oshkosh Whitewater River Falls	Stout La Crosse UW, Madison UW, Milwaukee
90		
	Milwaukee La Crosse	Whitewater Eau Claire, Superior, Stevens Point Oshkosh, River Falls
80		
	Eau Claire	
70		
	Platteville Stevens Point	Platteville
60		
	Superior	
50		
	Stout	
40		
30		
20		
10		
0		

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[1] Doi and Scott, Normative Data on the Utilization of Instructional Space in Colleges and Universities. July, 1960.

CHART 89

A COMPARISON OF STUDENT STATION UTILIZATION IN WISCONSIN INSTITUTIONS WITH STUDENT STATION UTILIZATION IN 174 PUBLIC DEGREE-GRANTING INSTITUTIONS IN THE UNITED STATES [1]

Fall, 1961

Percentile Ranking

Classrooms

99------------------------------------

Eau Claire
Whitewater, Stevens Point
River Falls
90------------------------------------

80------------------------------------
La Crosse
Stout
Platteville
70------------------------------------

Oshkosh
UW, Milwaukee
60------------------------------------
50------------------------------------
40------------------------------------
Superior
UW, Madison
30------------------------------------
20------------------------------------
10------------------------------------
0------------------------------------

Percentile Ranking

Laboratories

99------------------------------------

Stout

90------------------------------------
La Crosse
UW, Milwaukee
Stevens Point
80------------------------------------

River Falls
Eau Claire, Platteville
70------------------------------------
Oshkosh, Whitewater

60------------------------------------
50------------------------------------
UW, Madison
40------------------------------------

30------------------------------------
Superior
20------------------------------------
10------------------------------------
0------------------------------------

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[1] Doi and Scott, Normative Data on the Utilization of Instructional Space in Colleges and Universities, July, 1960.

CHART 90

WEEKLY ROOM PERIOD USE REPORTED IN SURVEYS FROM OTHER STATES CLASSROOMS

Study	No. of Inst.	Date	In Classrooms Avg. No. Periods Used Per Week Actual	 Recommended
California [1]				30
H. M. Silvey[2]	29	1959	23.9	
Kansas	5[3]	1960	24.2	
Nebraska		1961		
State University			20.2	30
Municipal Univ.			28.7	30
Teachers College			20.6	30
South Dakota	7[4]	1960	19.0	
Doi-Scott 50th Percentile [5]	90	1960	20.2	
Wisconsin All Institutional Avg.	11	1961	28.4	30

[1] Primarily a study of institutional capacities. Recommended changes in standards of utilization

[2] Bureau of Research And Examination Services, Iowa State Teachers College, Cedar Falls, Iowa.

[3] Totals reported here are those for 3 state colleges and 2 state universities.

[4] Public institutions only.

[5] Public degree-granting institutions.

CHART 90 Cont'd

WEEKLY ROOM PERIOD USE REPORTED IN SURVEYS FROM OTHER STATES LABORATORIES

Study	No. of Inst.	Date	In Laboratories Avg. No. Periods Used Per Week Actual	 Recommended
California [1]				20
H. M. Silvey [2]	29	1959	16.5	
Kansas	5[3]	1960	18.2	
Nebraska		1961	15 [6]	
State University				20
Municipal Univ.				20
Teachers College				20
South Dakota	7[4]	1960	15.5	
Doi-Scott 50th Percentile [5]	90	1960	15.8	
Wisconsin All Institutional Avg.	11	1961	20.8	24

[1] Primarily a study of institutional capacities. Recommended changes in standards of utilization

[2] Bureau of Research and Examination Services. Iowa State Teachers College, Cedar Falls, Iowa.

[3] Totals reported here are those for 3 state colleges and 2 state universities.

[4] Public institutions only

[5] Public degree-granting instituions

[6] Median for all Nebraska instituions

CHART 91

PERCENT OF STUDENT STATION UTILIZATION
CLASSROOMS

Study	No. of Inst.	Date	In Classrooms Percent of Student Station Utilization	
			Actual	Recommended
California				60[1]
H. M. Silvey	29		54.3[2]	
Kansas	5		53.0[3]	
Nebraska				
State University			49 [3]	65
Municipal Univ.			58 [3]	65
Teachers College			61.5 [3]	65
South Dakota	7		48.4[3]	
Doi-Scott 50th Percentile	90		54.4[5]	
Wisconsin All Institutional Avg.	11		54.6	67

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[1] Based on 45 hour week
[2] Based on 44 hour week
[3] When room is in use
[4] Median all institutions
[5] Fiftieth percentile degree-granting institutions

CHART 91 Cont'd

PERCENT OF STUDENT STATION UTILIZATION LABORATORIES

Study	No. of Inst.	Date	In Laboratories Percent of Student Station Utilization Actual	 Recommended
California				80[1]
H. M. Silvey	29		37.5[2]	
Kansas	5		63.8[3]	
Nebraska			59[4]	
State University				80
Municipal Univ.				80
Teachers College				80
South Dakota	7		39.5[3]	
Doi-Scott 50th Percentile	90		62.7	
Wisconsin All Institutional Avg.	11		66.6	80

[1] Based on 45 hour week
[2] Based on 44 hour week
[3] When room is in use
[4] Median all institutions

C H A R T 92

THE PERCENTAGE DISTRIBUTION OF ASSIGNABLE AND NON-ASSIGNABLE AREAS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN
Fall, 1961

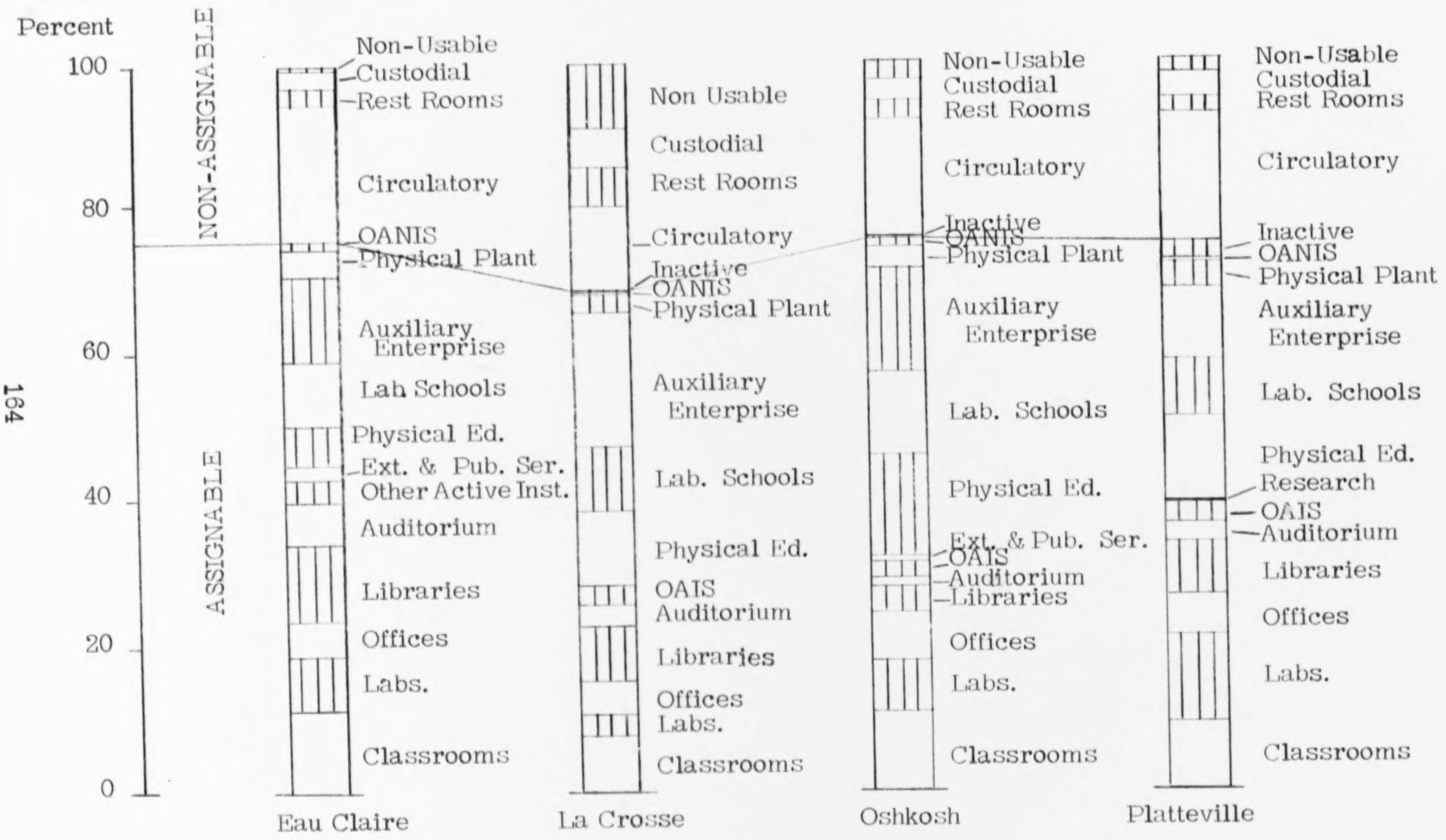
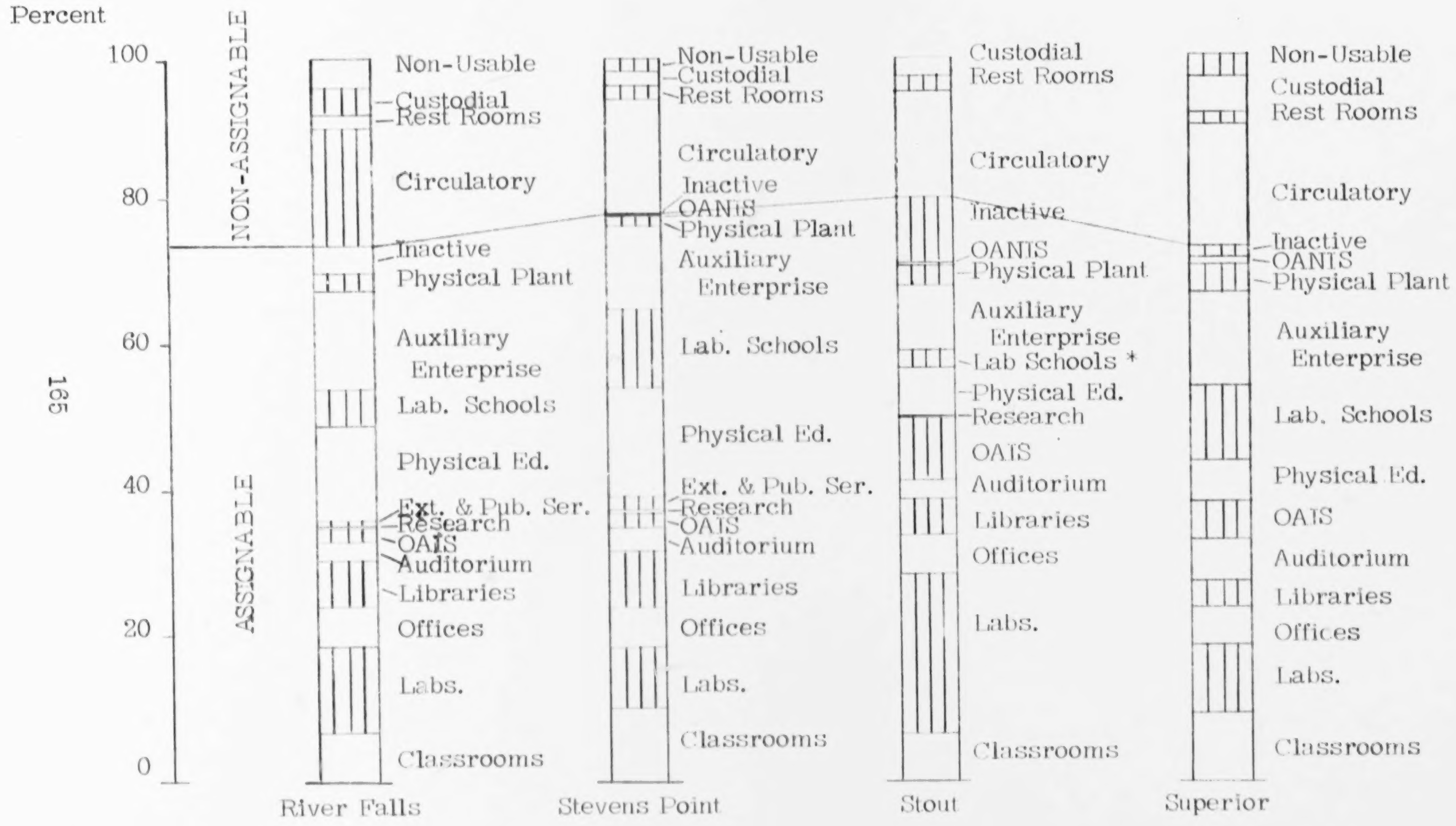


CHART 93

THE PERCENTAGE DISTRIBUTION OF ASSIGNABLE AND NON-ASSIGNABLE AREAS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961



* Stout uses collegiate space for laboratory school purposes but has no laboratory school.

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THE PERCENTAGE DISTRIBUTION OF ASSIGNABLE AND NON-ASSIGNABLE AREAS AT WISCONSIN STATE COLLEGES AND THE UNIVERSITY OF WISCONSIN

Fall, 1961